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# THE STRENGTH TO SUCCEED THE WILL TO WIN

Wirspear Business Reference Room
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Edmonton, Alberta T6G 2R6

THE STRENGTH
TO SUCCEED
THE WILL TO WIN

Petro-Canada is a major Canadian oil and gas company and a leader in the Canadian petroleum industry. We are an integrated company, with a balanced portfolio of businesses spanning both the upstream and downstream sectors of the industry.

In the upstream, we explore for, develop, produce and market crude oil, natural gas and natural gas liquids. In the downstream, we refine, distribute and market petroleum products and related goods and services.

Petro-Canada's vision is to become the pre-eminent integrated oil and gas company in Canada through industry leadership in its core businesses.


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Fold-out:

- We have the financial strength to support solid investment in growth, the flexibility to pursue new opportunities and a skilled and dedicated workforce to reach our business objectives.
- We plan to invest more than $1 billion in 1999 to build on our strong portfolio of businesses, while carefully monitoring oil prices.
- We are an integrated company, with operations from exploration to the gasoline pump, providing resilience against commodity price fluctuations.
- We are a leader in Grand Banks offshore oil, with Hibernia production expected to double in 1999, Terra Nova development on time and on budget, and active exploration for new opportunities.
- We are a leading natural gas explorer/producer in Western Canada, more than replacing our 1998 production with proved reserves additions.
- We are a major player in developing Canada's vast oil sands resources, at Syncrude and future projects.
- We are Canada's Gas Station, determined to be the brand of choice, and a low-cost refiner and marketer of quality fuels tailored to Canadian driving conditions.
- We are committed to continuously improving our environmental performance and building lasting partnerships with Canadian communities.

## PETRO-CANADA'S BUSINESSES AT A GLANCE

| | | BUSINESS DESCRIPTION |
|---|---|---|
| **UPSTREAM** | **Western Canada Oil, Natural Gas and Natural Gas Liquids** | • Explores for, develops, produces and markets crude oil, natural gas and natural gas liquids<br>• One of the largest producers in Western Canada, with 1998 daily sales of 76 200 barrels of oil and liquids, and 722 million cubic feet of natural gas<br>• Holds 12% interest in Syncrude, the world's largest oil sands plant<br>• Extracts natural gas liquids at a straddle plant in Empress, Alberta |
| | **Grand Banks Oil** | • Explores for, develops, produces and markets Grand Banks oil<br>• 20% interest in the producing Hibernia field<br>• 29% interest in the Terra Nova oil development<br>• Owns major interests in other significant discoveries and exploration acreage |
| | **International** | • Selectively invests in international opportunities<br>• Operates development and exploration projects in Algeria<br>• Operates exploration project in Tunisia<br>• Owns working interest in two fields offshore Norway |
| **DOWNSTREAM** | **Refining** | • Converts crude oil into refined products, including gasoline, diesel, jet fuel and asphalt<br>• Provides 18% of Canada's refining capacity for domestic markets |
| | **Marketing** | • Markets refined products and services through a nationwide network of retail and wholesale outlets<br>• Canada's second largest marketer, with a 17% share of the refined products market |
| | **Lubricants** | • Manufactures and markets lubricants<br>• Produces exceptionally pure base oils<br>• A global supplier of high-quality specialty lubricants |

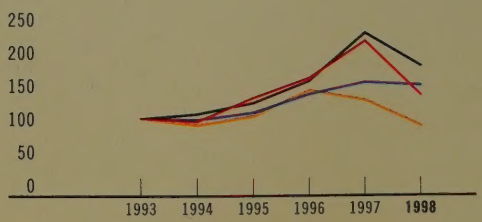
| 1998 OBJECTIVES | 1998 HIGHLIGHTS | PLANS FOR 1999 |
|---|---|---|
| • Expand gas business through focused exploration and development in Alberta Foothills and northeastern British Columbia<br>• Begin phased reduction of conventional oil properties<br>• Participate in Syncrude expansion and evaluate *in situ* oil sands properties<br>• Investigate strategic alternatives in the straddle plant and ICG businesses | • Added 488 billion cubic feet of gas equivalent of proved reserves while reducing finding and development costs to $7.40 per barrel of oil equivalent<br>• Increased probable gas reserves to over 900 billion cubic feet<br>• Divested several non-core properties<br>• Achieved record Syncrude production of 25 200 barrels per day net to Petro-Canada<br>• Filed commercial approval application for the MacKay River *in situ* oil sands property<br>• Sold ICG Propane Inc. for gross proceeds of $177 million | • Boost natural gas reserves and maintain production at current levels<br>• Continue phased reduction of conventional oil properties<br>• Continue progress toward first-quartile finding and development costs<br>• Participate in Syncrude expansion and continue *in situ* oil sands evaluation |
| • Drill Hibernia wells and produce 12 000 barrels per day net to Petro-Canada<br>• Begin Terra Nova construction<br>• Undertake seismic and begin multi-well drilling program on other fields | • Seven Hibernia wells were operational at year end, including four producers and three water injectors<br>• Petro-Canada's Hibernia production averaged 13 000 barrels per day<br>• Commenced Terra Nova construction<br>• Began multi-well drilling program with Hebron well<br>• Secured new exploration acreage for the third consecutive year | • Drill seven Hibernia wells and investigate low-cost ways to expand platform production capacity<br>• Double Petro-Canada's share of Hibernia production to 26 000 barrels per day<br>• Continue Terra Nova construction and begin drilling pre-production wells<br>• Drill exploratory and delineation wells at other Grand Banks locations |
| • Continue Algerian drilling program<br>• Build offshore expertise through strategic alliance with Norsk Hydro<br>• Identify new international opportunities | • Made discoveries in Algeria at Timellouline South, Tahala North and Tamadanet South<br>• Extended Algerian production sharing contract<br>• Realized full year of production at Njord field in Norway<br>• Secured exploration permit in Tunisia | • Evaluate Algerian discoveries and continue drilling program<br>• Continue Norwegian participation<br>• Begin seismic acquisition in Tunisia<br>• Assess opportunities to expand international business |
| • Maintain high capacity utilization<br>• Optimize feedstock mix and drive toward low-cost competitive position | • Increased total rated crude oil refining capacity by 8% to reflect success in sustaining high throughputs<br>• Completed catalytic cracker expansion to boost gasoline output and improve energy efficiency of the Montreal refinery<br>• Record asphalt sales of 1.4 billion litres | • Provide strong earnings and cash flow to the corporation<br>• Maintain high capacity utilization and continue to focus on plant reliability<br>• Enhance participation in niche markets<br>• Position refineries to meet future environmental regulations, particularly with respect to fuel reformulation |
| • Increase throughput per site<br>• Build on the strength of the Petro-Canada brand through retail and wholesale network | • Achieved average retail throughput per site of 3.5 million litres, highest among the national integrateds' total networks<br>• Added about 800 000 Canadian households to Petro-Points membership and enhanced the customer loyalty program with new business partners, rewards and in-store promotions | • Provide strong earnings and cash flow to the corporation<br>• Increase retail throughput per site<br>• Deliver increased non-petroleum revenue through aggressive merchandising, improved inventory processes and new product offerings<br>• Continue roll-out of new-image sites |
| • Develop high-margin markets<br>• Maximize production capacity and focus on cost management<br>• Address competitive concerns in the marketplace and deliver financial performance | • Signed expanded, 15-year agreement with U.S.-based Witco Corporation, to market and distribute Petro-Canada's paraffinic white oils in North America, Latin America and Asia-Pacific<br>• Increased total sales of lubricants by 8.6%, to 669 million litres<br>• Completed restructuring program to streamline operations and lower costs | • Provide strong earnings and cash flow to the corporation<br>• Strive for cost of capital returns within a challenging business environment<br>• Increase sales of higher-margin lubricants through Witco agreement<br>• Continue to develop international and domestic markets |

# HIGHLIGHTS

| (stated in millions of Canadian dollars, unless otherwise indicated) | 1998 | 1997 | 1996 |
|---|---|---|---|
| **FINANCIAL** | | | |
| Earnings from operations (in 1998, before reorganization costs) | **$ 130** | $ 314 | $ 247 |
| Net earnings | **95** | 306 | 247 |
| Cash flow[1] | **830** | 1 263 | 863 |
| Per share (dollars) | | | |
| Earnings from operations (in 1998, before reorganization costs) | **0.48** | 1.16 | 0.94 |
| Earnings | **0.35** | 1.13 | 0.94 |
| Cash flow | **3.06** | 4.66 | 3.29 |
| Dividends paid | **0.32** | 0.26 | 0.20 |
| Expenditures on property, plant and equipment and exploration | **1 116** | 1 049 | 959 |
| Return on capital employed (per cent) | **3.0** | 6.8 | 6.2 |
| Cash flow return on capital employed (per cent) | **16.3** | 24.5 | 18.5 |
| Debt | **1 829** | 1 741 | 1 709 |
| Debt to debt plus equity (per cent) | **31.7** | 30.7 | 31.6 |
| Debt to cash flow (times) | **2.2** | 1.4 | 2.0 |
| Operating return on capital employed (in 1998, before reorganization costs, per cent) | **3.6** | 6.9 | 6.2 |
| **OPERATING** | | | |
| Crude oil and field natural gas liquids production, net before royalties (thousands of barrels per day) | **101.1** | 95.1 | 97.3 |
| Natural gas production, net before royalties, excluding injectants (millions of cubic feet per day) | **722** | 760 | 712 |
| Ethane and natural gas liquids production from straddle plants (thousands of barrels per day) | **35.2** | 39.6 | 34.9 |
| Proved oil and field natural gas liquids reserves, net before royalties (millions of barrels) | **476** | 432 | 452 |
| Proved natural gas reserves, net before royalties (trillions of cubic feet) | **2.5** | 2.5 | 2.6 |
| Refined petroleum product sales (thousands of cubic metres per day) | **49.1** | 48.5 | 43.7 |
| Average refinery utilization[2] (per cent) | **95** | 103 | 99 |

1 Cash flow from operations before changes in non-cash working items.

2 Total daily rated refinery capacity is now 49 000 cubic metres per day, as a result of a reassessment in the fourth quarter of 1998.




**Five-Year Share Price Performance**

(December 31, 1993 = 100)

Changes in yearly closing values for Petro-Canada common shares compared with the Toronto Stock Exchange (TSE) 300 Index, the TSE Integrated Oils Sub-Index (INO) and the Oil & Gas Producers Sub-Index (OGP).

- **Petro-Canada**
- **TSE 300 Index**
- **TSE Integrated Oils Sub-Index**
- **Oil & Gas Producers Sub-Index**

# TO OUR SHAREHOLDERS

The business environment for our industry in 1998 was marked by the lowest world oil prices in many years. Our consolidated earnings from operations were $130 million, compared with $314 million in 1997. Cash flow declined to $830 million from $1.26 billion.

We expect the difficult business environment to continue over the short term. However, we are confident of the ability of Petro-Canada to continue to pursue its strategies and to take advantage of new opportunities during 1999 and beyond.

Petro-Canada has one of the strongest balance sheets in our industry. Our debt at year-end 1998 was just over twice our annual cash flow. We intend to continue our conservative approach to debt management and to the maintenance of financial flexibility.

We have a diversified portfolio of businesses that will continue to be able to support growth well into the new millennium. Each of our businesses is led and supported by teams of employees with the knowledge, skills and experience necessary to the achievement of strategic objectives and to the realization of new opportunities.

We strengthened the focus on our core businesses through the disposition during 1998 of more than $500 million of non-core assets, including ICG Propane Inc., our 50 per cent interest in the Petro-Canada Centre office complex in Calgary, and a number of Western Canada oil properties.

Petro-Canada continues to pursue its vision of pre-eminence as a Canadian integrated oil and gas company through attention to the key value drivers in our businesses, to achievement of operational excellence, and to the active value-based management of our portfolio of businesses.

During 1998, Petro-Canada advanced the strategies of each of our core businesses.

### OIL DEVELOPMENTS ATTRACTIVE

Petro-Canada continued its strategic shift of oil production from Western Canada to the world-scale development of the Grand Banks offshore Newfoundland. Our current Western Canada conventional oil production is approximately 25 000 barrels per day from about 30 fields. During 1998, the Hibernia field completed its first year of production and substantial progress was made toward our target of first oil at Terra Nova by December 2000. We anticipate that in 2001, our production from the Hibernia and Terra Nova fields will be approximately 60 000 barrels per day. Oil developments of this scale are economically viable even in lower commodity price environments.

# PETRO-CANADA WILL MANAGE CAPITAL AND OPERATING COSTS CAREFULLY. WE WILL CONTINUE TO PRESERVE THE INTEGRITY OF OUR BALANCE SHEET AND TO STEWARD DELIVERY OF OUR GROWTH STRATEGIES

During 1998, Petro-Canada increased its Grand Banks acreage, participated in large seismic surveys and began a multi-well drilling program to further identify and define future Grand Banks developments.

We continue to consider the Syncrude oil sands mining operation in Northern Alberta as another major source of future oil production growth for Petro-Canada. We anticipate that our share of production from Syncrude will double to 50 000 barrels per day within the next decade.

Petro-Canada is positioned to proceed with a substantial *in situ* oil sands development on its MacKay River leases when the timing is appropriate.

### NATURAL GAS GROWTH

We are continuing to build on our competitive advantage in natural gas in our areas of concentration in the Foothills of Alberta and northeastern British Columbia, which are characterized by large reserves and our high level of infrastructure ownership. We have the seismic databases and the expertise in seismic interpretation and horizontal drilling which are essential for exploitation of the complex geology in these areas.

We achieved record natural gas reserve additions for the fourth consecutive year and replaced 129 per cent of 1998 production. At year end, Petro-Canada's proved plus probable natural gas reserves were 3.6 trillion cubic feet.

### DOWNSTREAM DELIVERS EARNINGS AND CASH FLOW

The business of refining and marketing petroleum products provides a cushion against low oil prices. Petro-Canada's refining and marketing business is delivering cost of capital returns and record cash flow.

We have achieved sustained high utilization of our three refineries while improving maintenance processes and eliminating processing constraints.

We have divested low-volume retail locations while adding sites with new images and offerings which build on our unique Canadian brand.

We have strengthened our lubricants business with lower-cost operations and a global marketing arrangement with Witco Corporation, a distributor of specialty lubricants. We expect improving returns from our lubricants business in 1999.

### CORPORATE RESPONSIBILITY

The business challenges resulting from low commodity prices can undermine commitment to initiatives which relate to environment, health and safety and community investment.

At Petro-Canada, we consider attention to such initiatives fundamental to our vision of pre-eminence, and to the achievement of our business objectives. We remain committed to those objectives.

Since 1990, we have made substantial progress in reducing greenhouse gas emissions from our facilities, together with improvements on measures of energy efficiency and carbon intensity.

Petro-Canada recently received a Leadership Award from Canada's Voluntary Challenge and Registry program, which is dedicated to helping Canadian organizations achieve net greenhouse gas reductions through voluntary means. We continue to champion its objectives.

Our industry will continue to face significant environmental issues in both the upstream and downstream sectors. We are committed to working with our industry colleagues, with other industries, with

James M. Stanford
PRESIDENT AND CHIEF
EXECUTIVE OFFICER

Thomas E. Kierans
CHAIRMAN OF THE BOARD

governments at all levels, and with non-governmental organizations to ensure the timely resolution of these issues in the best interests of our stakeholders and all Canadians. This commitment includes activities ranging from community town hall meetings relating to activity at individual facilities, to participation in the World Business Council for Sustainable Development.

Petro-Canada's community investment programs continue to represent our values as a corporation and our commitment to communities in Canada. Our community investment programs focus on education, environment, health and community services, and arts and culture. The Petro-Canada Olympic Torch Scholarship Fund continues to provide a significant level of support to student athletes and coaches across Canada.

Our community investment efforts have earned us ongoing recognition from the Canadian Centre for Philanthropy as an Imagine Caring Company. We value this recognition. We intend to continue to earn such recognition and to encourage others to do so as well.

**OUR FUTURE**

We expect the global supply and demand dynamics for crude oil to result in low prices over the medium term. In the near term, we expect oil prices in the US$12 range and an average natural gas price of $2.00 per thousand cubic feet. We expect demand for refined petroleum products to increase by 1.8 per cent.

Petro-Canada plans to reinvest about $1 billion in our businesses in 1999. We will manage capital and operating costs carefully and remain alert to attractive domestic and international acquisition opportunities. We will continue to preserve the integrity of our balance sheet and to steward delivery of our growth strategies.

We have all of the prerequisites for continued success: the vision, the asset base, the financial strength, and the human resources. Petro-Canada is approaching the new millennium with strength and confidence.

James M. Stanford
President and Chief Executive Officer

Thomas A. Kierans
Chairman of the Board

Petro-Canada continues to engineer a remarkable turnaround in the Wildcat Hills/Benjamin Creek area west of Calgary. The Company's share of production from the area has more than doubled since 1995.

# UPSTREAM

Petro-Canada's Upstream business focuses on world-scale oil developments — Hibernia, Terra Nova and Syncrude — while building natural gas reserves and maintaining strong gas production in Western Canada.

Total 1998 production was 173 300 barrels of oil equivalent per day, up one per cent from 1997 despite the net sale of non-core properties producing 6 800 barrels of oil equivalent per day. Petro-Canada participated in 287 wells during 1998, with a drilling success rate of 92 per cent. Finding and development costs in Western Canada were reduced by 26 cents to $7.40 per barrel of oil equivalent.

Oil and liquids production rose six per cent to 101 100 barrels per day. The first full year of production from the Hibernia field offshore Newfoundland more than offset lower Western Canada oil volumes resulting from the planned sale of mature properties and natural field decline. Property sales were the primary reason for a drop in natural gas volumes to 722 million cubic feet per day, from 760 million in 1997.

Petro-Canada added a record 340 billion cubic feet of proved gas reserves through exploration and development, replacing 1998 production by 129 per cent. Large gains in probable reserves during 1998 — from the Alberta Foothills, Algeria and the Syncrude expansion — point to the bright future of Petro-Canada's Upstream business. Proved plus probable reserves at year end totaled 3.6 trillion cubic feet of natural gas and 908 million barrels of crude oil and liquids.

### A YEAR OF PROGRESS ON THE GRAND BANKS

Petro-Canada benefited from a strong first full year of production at Hibernia in 1998, while laying the foundation for substantial oil growth through the Terra Nova development, land acquisition and exploration.

Significant steps were taken to expand marketing opportunities for Hibernia, Terra Nova and future Grand Banks oil. In October, a transshipment facility opened at Whiffen Head, Newfoundland. Expansion plans for the facility include a fourth 500 000 barrel storage tank and a second tanker berth. A third shuttle tanker will soon be under construction and is scheduled for delivery in the third quarter of 2000.

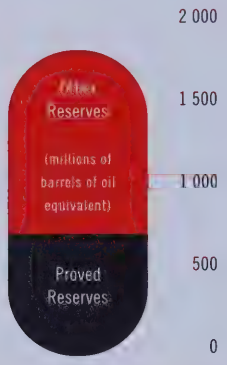
Petro-Canada is also exploring opportunities to enhance the region's global competitiveness. The sharing of exploration and production infrastructure is a key first step in this direction.

### HIBERNIA PRODUCTION TO DOUBLE IN 1999

Hibernia produced 24 million barrels of oil in its first full year, while experiencing the normal production variations associated with the startup of large offshore developments. Petro-Canada's 20 per cent share in Hibernia averaged 13 000 barrels per day in 1998 and is expected to double in 1999. Initial recoverable reserves from the field, 315 kilometres southeast of St. John's, Newfoundland, are estimated at 615 million barrels.

Hibernia is on target to reach plateau production of 135 000 barrels per day in mid-1999. Operating costs are expected to fall below $3.00 per barrel in 1999, from $6.45 in 1998. Seven wells are planned in 1999, including four oil producers, two gas injectors and one water injector.

# PETRO-CANADA'S LARGE RESERVES INVENTORY PROVIDES A SOLID FOUNDATION FOR FUTURE GROWTH




Includes proved and probable reserves and other reserves planned to be developed.

Given Hibernia's strong production performance, owners are examining low-cost ways to expand platform production capability. Other initiatives to improve Hibernia economics may include sharing infrastructure with future developments, using the platform's central location to gather and process oil from nearby fields which may not economically support stand-alone facilities, and tapping into a second producing formation.

### TERRA NOVA ON TRACK FOR 2000 STARTUP

Terra Nova, 35 kilometres southeast of Hibernia, is progressing toward a first oil target of December 2000. Petro-Canada is the operator with a 29 per cent interest.

Peak production of 115 000 barrels per day, expected soon after startup, will generate 33 000 barrels per day for Petro-Canada. Twenty-four wells are planned to recover estimated field reserves of 370 million barrels from two fault blocks, which are expected to produce for 15 years. A third fault block, not yet tested, has the potential to yield another 100 million barrels of oil, which would extend the life of the field by three years.

Construction of the hull for the production vessel and fabrication of four large topsides modules began in the third quarter of 1998. Excavation of "glory holes" — to protect wellhead equipment from icebergs dragging on the sea floor — will be completed in the summer of 1999, when drilling of the six pre-production wells will begin.

The vessel hull is to arrive at Bull Arm, Newfoundland, in February 2000, for mounting of the topsides modules. Flowline installation will be complete by the fall of 2000, with startup expected late in the fourth quarter.

The Terra Nova owners continue to evaluate opportunities to reduce costs. Late in 1998, an opportunity emerged to take advantage of lower drill rig prices resulting from a slowdown in the world oil industry. Tenders have been issued for a rig to replace one previously under contract which would have required extensive, costly upgrades. Using a newer, more suitable rig is expected to result in significant cost savings and reduced development risk.

### BEYOND HIBERNIA & TERRA NOVA

With Hibernia and Terra Nova moving forward, Petro-Canada is pursuing opportunities for Grand Banks growth into the new millennium. Progress in 1998 included securing an interest in new exploration licences for the third consecutive year, undertaking a three-dimensional seismic survey over the Riverhead prospect and two adjacent parcels and drilling to identify the next major development after Terra Nova.

Results from the first well in a multi-well drilling program are encouraging. The Hebron D-94 well, 25 kilometres southeast of Hibernia, tested 3 500 barrels per day from an 86-metre productive zone. Additional drilling is planned in the field. Petro-Canada has a 21.9 per cent interest in the well.

Drilling of the next well in the program is under way at South Nautilus. Other locations include White Rose and the first Riverhead exploratory well.

In September, Petro-Canada acquired interests in six exploration licences comprising 835 000 gross acres, for a total work commitment of $166 million over five years. Two licences are in the underexplored Flemish Pass basin, while

**HOW TERRA NOVA OIL WILL BE PRODUCED**

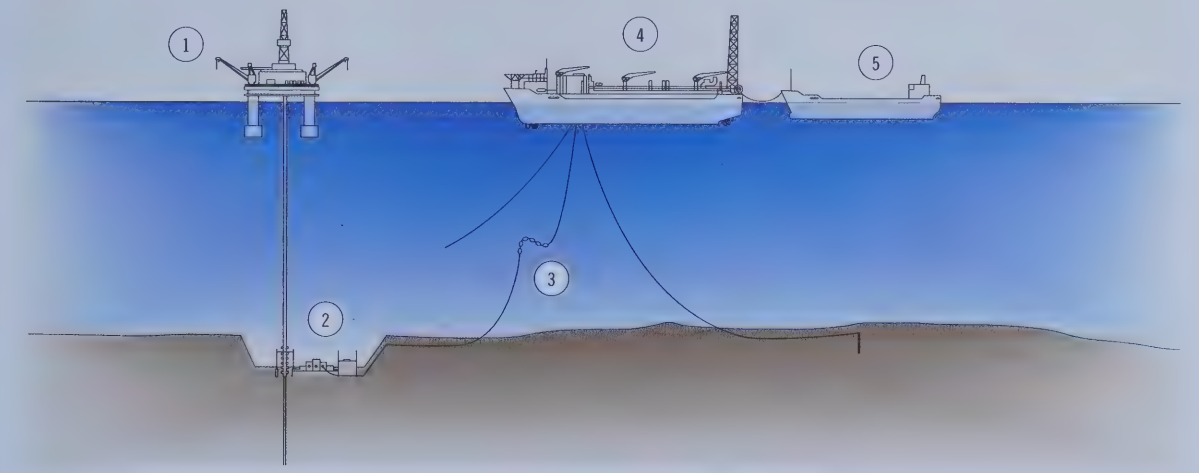
1 Production and injection wells will be drilled prior to project startup, enabling peak rates to be achieved quickly.

2 Glory holes will protect wellhead equipment from icebergs dragging on the ocean floor.

3 Subsea flowlines and risers will carry oil from the wells to the production vessel.

4 The production vessel will be able to process 125 000 barrels of oil per day, store 960 000 barrels and house up to 80 workers.

5 Shuttle tankers will carry Terra Nova oil to a trans-shipment terminal or directly to market.




the remaining four are in the Jeanne d'Arc basin, where all Grand Banks discoveries to date have been made.

**NEW INTERNATIONAL DISCOVERIES AND PRODUCTION**

Increased production offshore Norway, gas and liquids discoveries in Algeria and acquisition of rights to explore in Tunisia were international highlights in 1998. Petro-Canada continues to evaluate opportunities to gain critical mass in its international business through acquisition.

Petro-Canada's share of production from two fields offshore Norway, Njord and Veslefrikk, was 7 400 barrels per day in 1998 and will peak at more than 9 000 barrels in 2000. Interests in the Norwegian fields were acquired in 1996, in a strategic alliance with Norsk Hydro that provides Petro-Canada with access to extensive offshore expertise.

In southeast Algeria, sizable natural gas and liquids discoveries, coupled with stabilized production at the Tamadanet field, have prompted Petro-Canada to extend a production sharing contract with SONATRACH, the Algerian national oil company. Petro-Canada has relinquished the least prospective 25 per cent of the Tinrhert block and will drill two additional exploratory wells by 2002.

Five discoveries have been made on the block. The first, the Tamadanet oil field, began producing in 1996. Petro-Canada's production from Tamadanet, before royalties and the sharing of profit oil, averaged 4 500 barrels per day in 1998. Gas and liquids discoveries at Hassi Imoulaye, Timellouline South, Tahala North and Tamadanet South are being evaluated.

Petro-Canada has secured exclusive rights to explore in south-central Tunisia, on the 1.8-million-acre Tataouine block, which may be an extension of the prolific, oil-producing Algerian Berkine basin. Investment is expected to total $10 million over two years, with the option to extend the agreement to include exploration drilling in 2000.

**SYNCRUDE EXPANSION TO BOOST OIL SANDS PRODUCTION**

With a 12 per cent share in the Syncrude oil sands mining development in northern Alberta and more than 200 000 net acres of nearby leases, Petro-Canada is fully engaged in realizing the potential of Canada's vast oil sands resources.

A series of mine and upgrader expansions will boost Petro-Canada's share of daily Syncrude production from a record 25 200 barrels in 1998 to 30 000 barrels by 2000, and more than 50 000 barrels within the next decade.

Syncrude operating costs were $13.42 per barrel in 1998, up slightly from $13.37 in 1997. With increasing production and continued technological advances, operating costs are expected to fall to less than $12 per barrel by 2000.

Syncrude expects to complete upgrader debottlenecking, development of the Aurora mine and construction of the second North Mine production train in 2000.

In November, Petro-Canada filed a commercial approval application with regulatory authorities for its proposed MacKay River *in situ* oil sands development, west of Syncrude. The project will proceed when market conditions are more favourable for long-term development.

Drilling and seismic data indicate sufficient bitumen to fill a 22 000 barrel per day facility for 25 years on the MacKay River leases, in which Petro-Canada holds a 100 per cent interest. Further drilling will test the upside potential of the area in 1999. Petro-Canada also has a 25 per cent

interest in, and is operator of, a second large group of nearby oil sands leases.

### CONVENTIONAL OIL STRATEGY ADVANCES

Petro-Canada is gradually exiting the conventional oil business in Western Canada. Late in 1998, interests in four high-cost, non-core fields — representing average daily production of about 10 500 barrels of oil equivalent — were sold for $118 million and properties valued at $12 million. Further property sales are planned in 1999 and 2000, with proceeds directed toward the best value-creating opportunities in Petro-Canada's core businesses.

### NATURAL GAS LIQUIDS FEELS MARGIN SQUEEZE

Petro-Canada's natural gas liquids extraction business experienced a severe margin squeeze in 1998 due to high feedstock costs and low natural gas liquids prices.

In December, Petro-Canada closed the sale of ICG Propane Inc. for gross proceeds of $177 million.

### RESERVES ADDITIONS ARE NATURAL GAS HIGHLIGHT

Petro-Canada's natural gas strategy focuses on replacing production annually with new reserves, reducing costs through operational excellence, and enhancing marketing strength and flexibility.

Exploration and development activity in 1998 resulted in a fourth consecutive record for proved natural gas reserve additions. Drilling success in the southern Alberta Foothills helped boost net probable reserves to 1.1 trillion cubic feet.

In northeastern British Columbia, where Petro-Canada is the largest producer of natural gas, results were mixed. Despite promising finds at North Laprise and Boundary Lake, disappointing drilling results at Clarke Lake and operational difficulties at Jedney, now resolved, led to lower than expected volumes in 1998. Petro-Canada's 1998 production from British Columbia averaged 238 million cubic feet per day.

Petro-Canada participated in 187 gas wells during 1998, up from 144 in 1997. Three-year finding and development costs for natural gas, from 1996 to 1998, were better than the industry average at $0.76 per thousand cubic feet of gas equivalent.

Petro-Canada realized an average Alberta field price of $1.96 per thousand cubic feet of natural gas, up from $1.85 in 1997. In the fourth quarter, Petro-Canada received an average price of $2.37 per thousand cubic feet.

### FOOTHILLS A NATURAL GAS FOCAL POINT

The Foothills area of southern Alberta best demonstrated the application of Petro-Canada's natural gas strategy in 1998. At Wildcat Hills/Benjamin Creek, 70 kilometres west of Calgary, the Company continues to engineer a remarkable turnaround. Year-end production was 62 million cubic feet per day, compared with just 30 million in 1995. New volumes — along with twinning and tie-in of a gathering pipeline — have boosted plant utilization to about 85 per cent from 40 per cent. The plant is expected to be running at full capacity by the end of the first quarter of 1999. Net undeveloped lands acquired since 1995, including the recent acquisition of a 90 per cent interest in the nearby Salter field, total 130 000 acres.

Petro-Canada's share of proved plus probable reserve additions in the Wildcat Hills area since 1995 exceeds 500 billion cubic feet equivalent, including 145 billion booked as proved through 1998 exploration and development. Petro-Canada has drilled 18 consecutive successful wells in the area. Eight to 10 wells are planned in 1999.

At Benjamin Creek, Petro-Canada made a sizable gas discovery early in 1999. The well is expected to be producing 20 to 25 million cubic feet per day by the second quarter of 1999. Petro-Canada has high working interests in lands between the Benjamin Creek and Wildcat Hills fields and several follow-up wells are planned.

Around the clock and around the world, Petro-Canada is actively pursuing performance and growth initiatives in its Upstream and Downstream businesses. The Strength to Succeed, the Will to Win is evident in the daily efforts of Petro-Canada employees to create long-term shareholder value.
Below: Supply ships approach the Hibernia oil platform as day breaks over the Grand Banks in the North Atlantic, 315 kilometres southeast of St. John's, Newfoundland. Petro-Canada's share of production from Hibernia averaged 13 000 barrels per day in 1998 and is expected to double in 1999.

The first light of morning casts its glow over a Petro-Canada retail outlet on Montreal's south shore. On a typical day, more than 600 000 purchases are made nationwide at Canada's Gas Station.

6:39am

# 7:05am

Karen Lee, co-ordinator, natural gas marketing, concludes an early morning sale of gas to a utility customer in British Columbia. A leading Canadian marketer of natural gas, Petro-Canada expects to benefit from increasing export capacity and higher prices in 1999 and beyond.

# 7:43am

Drilling consultant Wayne Kerbes (left) and Martin Wichert, Wildcat Hills asset team leader, discuss the progress of a horizontal gas well over coffee while the drilling crew enjoys breakfast after a night's work on the rig. The well came on stream in February 1999, with initial production of 15 million cubic feet per day.

Viscosity testing is an important part of Jim Stollard's job as a senior asphalt technologist at the Company's Oakville refinery. Petro-Canada is responding to increased demand for specialized asphalt products for road construction, roofing and other uses. Niche market sales are a key component of refinery profitability.

# 8:24am

The bow of Terra Nova's production vessel takes shape at the Daewoo Heavy Industries shipyard in Okpo, South Korea. The vessel is to arrive in Bull Arm, Newfoundland, in February 2000, for mounting of the topsides modules. Terra Nova is on schedule to meet a first oil target of December 2000. Petro-Canada's share of production from the development is expected to average 33 000 barrels per day in 2001.

# 9:41am

Members of an employee team, put together in 1998 to steward the sale of non-core oil properties in Western Canada, explore options over land maps at a weekly meeting. Nearly 100 employees were involved in the effort, which resulted in the sale of about 10 500 barrels of oil equivalent per day for $118 million and properties valued at $12 million. From left: Gary Birarda, Jennifer VanderKnijff, Don Blair, Mike Danyluk, Val Hobson, Emery Cherot.

When she's not restocking shelves or helping customers, 20-year-old Valerie Beauchamp is likely to be found on campus at the Université du Québec à Montréal. The first-year economics student is one of more than 1 000 Guest Service Attendants to receive a bursary under Petro-Canada's eight-year-old Back to School program. Indicative of the Company's commitment to education, the program helps attract and retain motivated individuals in an area of traditionally high staff turnover.

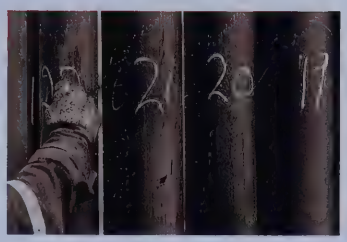
9:52am

Environment and education come together in an innovative way for children attending the Petro-Canada "Bird School." The Company sponsors week-long programs at Calgary's Inglewood Bird Sanctuary that give elementary to high-school students a hands-on opportunity to observe and study in nature's classroom.

# 10:08am

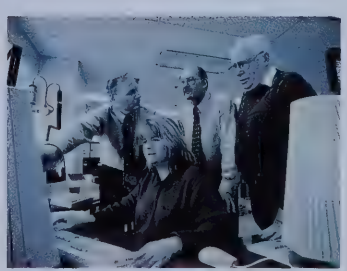
# 11:17am

A roughneck numbers stands of drill pipe as they come out of the hole during a routine bit change operation. Petro-Canada participated in 287 wells in 1998, with a drilling success rate of 92 per cent.



In the Norwegian Sea 450 kilometres north of Bergen, the Njord platform produces oil under a calm, midday sky. Petro-Canada's share of production from Njord and a second offshore Norway field, Veslefrikk, was 7 400 barrels per day in 1998 and is expected to peak at more than 9 000 barrels per day in 2000.

In a laboratory designed to simulate a retail environment, systems analyst Elizabeth Voyer tests software for Year 2000 compliance. Testing is a major component of Petro-Canada's preparations to meet the Year 2000 challenge. Looking on (from left) are: Brian Brenneman, Y2K project director, Ron Thomson, project co-ordinator, and Jack Green, manager of the Company's Integration Testing Facility.

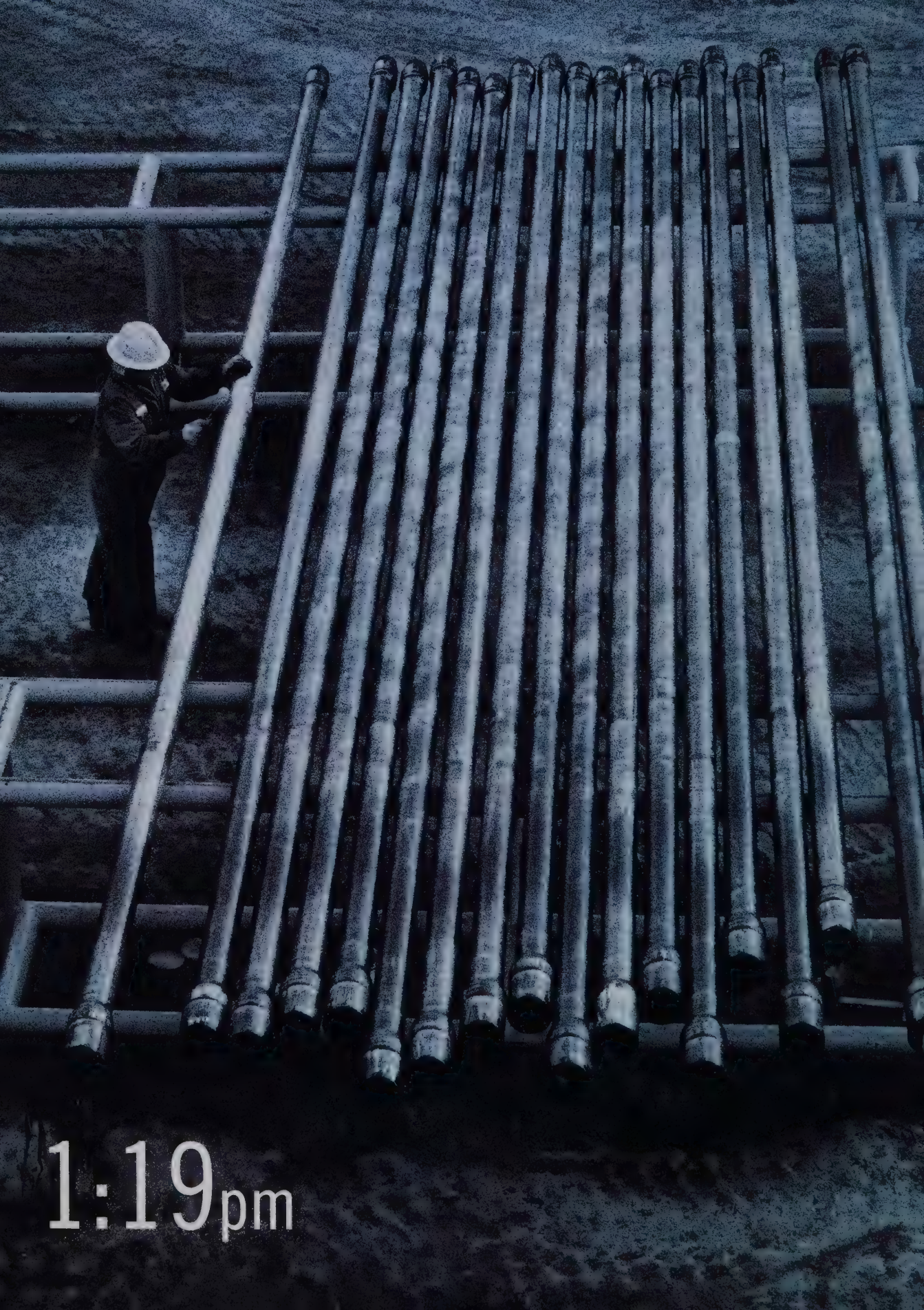


# 12:26pm

With 1998 natural gas production of 280 million cubic feet per day from six fields, net processing capacity of 400 million cubic feet per day at nine plants and rights to 450 000 acres of undeveloped land, Petro-Canada is a leading player in the Rocky Mountain Foothills of southern Alberta. The area is estimated to contain 19 trillion cubic feet of undiscovered natural gas.

# 12:45pm

This page and overleaf: in the Wildcat Hills, 70 kilometres west of Calgary, a Petro-Canada operated rig drills for natural gas. The Company has drilled 18 consecutive successful wells in the area since 1995.


1:19pm

# 1:32pm

Three-year-old Curtis Ewanchuk, son of Petro-Canada employees Bronie and Bea, was a winner in an annual poster contest promoting employee awareness of the Company's commitment to continuous improvement in environmental performance. Petro-Canada reduced greenhouse gases from its operated facilities by 79 800 tonnes of carbon dioxide equivalent in 1997.

# 1:48pm

Just another day at Syncrude, the world's largest oil sands mining operation, in northern Alberta. Petro-Canada's share of 1998 Syncrude production was a record 25 200 barrels per day. On April 16, Syncrude shipped its billionth barrel of oil, five years ahead of schedule.

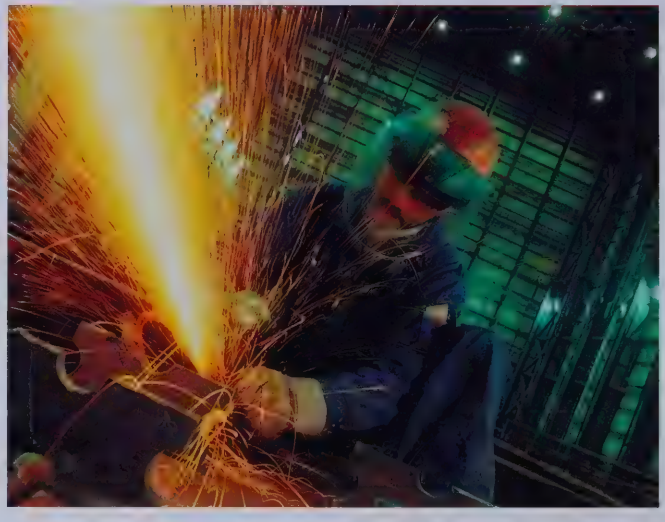
Executive Vice-President Boris Jackman talks with a Montreal employee during a break in a session to communicate strategic priorities for Petro-Canada's refining and marketing business. The Downstream turned in a strong financial performance in 1998, with operating earnings of $204 million and record cash flow of $420 million.

# 2:44pm

Algerian rig hands pose for the camera at the Timellouline South discovery well in southeastern Algeria. Early in 1998, the well tested at a stabilized daily rate of 117 million cubic feet of natural gas and 5 280 barrels of condensate. A discovery at Tahala North yielded test results of 3 300 barrels of oil, 2 800 barrels of condensate and 75 million cubic feet of gas per day, while a well at Tamadanet South tested 820 barrels of oil per day. The commercial potential of the discoveries is being evaluated.

# 2:53pm

At the Bull Arm construction facility near St. John's, Newfoundland, sparks fly from a steel plate that will form part of the deck assembly for one of Terra Nova's four topsides modules. During its construction phase, the development will create up to 1 100 jobs and 400 to 450 jobs after startup. About 58 per cent of Terra Nova's $4.5 billion in expenditures will be spent in Newfoundland.



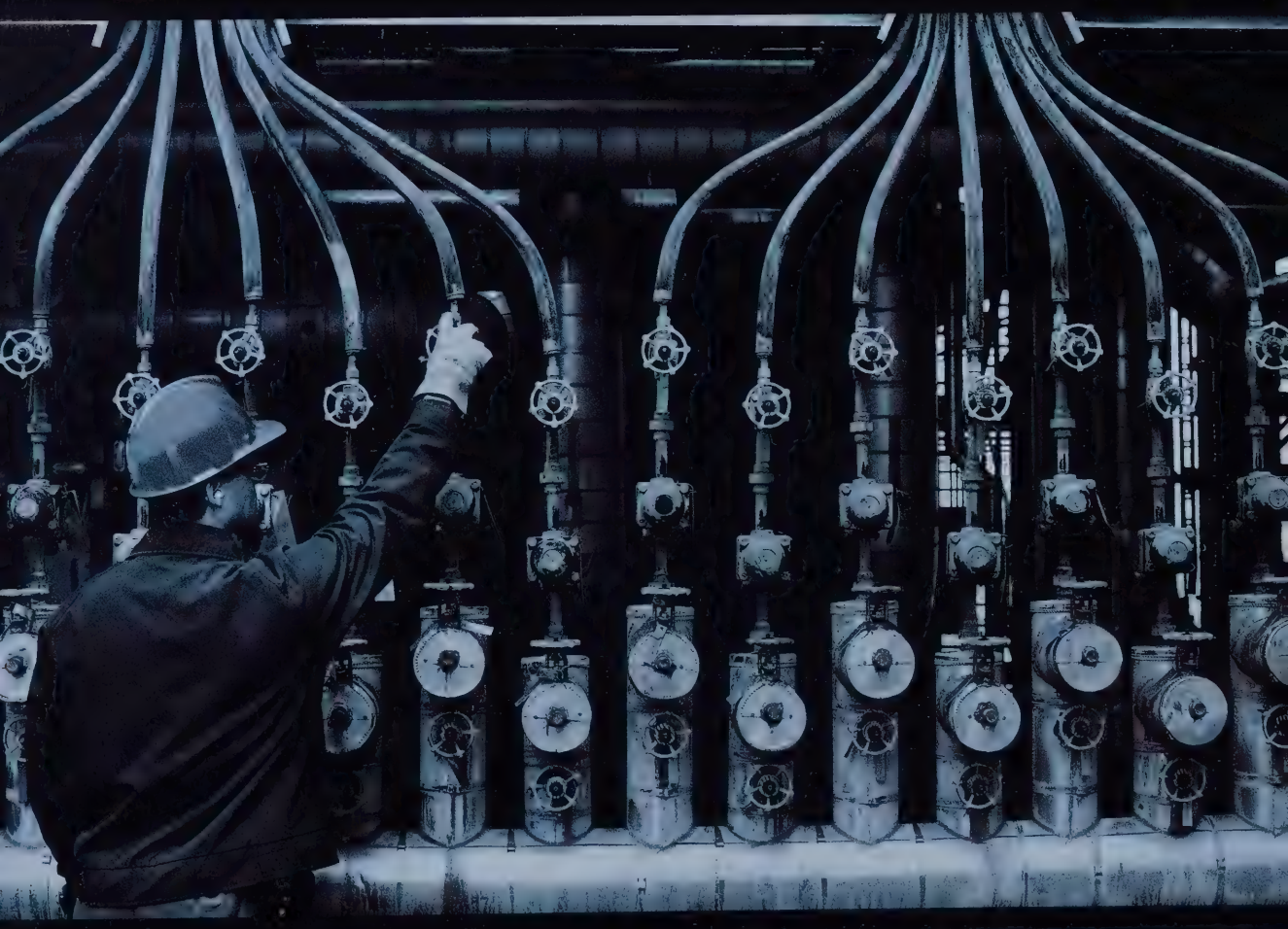
# 3:15pm

Maintenance specialists (from left) Yves Bourque, Gaetan Morel and Claude Donati complete inspection of a Petro-Canada soft-cloth car wash in Laval, Quebec. Generating revenue from non-petroleum sources, such as car washes, is a major focus of Petro-Canada's retail operation. The contribution from non-petroleum products and services has increased nearly 40 per cent since 1992. Most Petro-Canada car washes are soft-cloth operations, which are faster and provide a higher quality wash compared with competitors' touch-free washes.

# 4:09pm

Technician Jeff Grubbs adjusts pressure in a valve in the synthetic crude unit at Petro-Canada's Edmonton refinery. A benchmarking study by Solomon Associates ranked the central Alberta facility in the top quartile of North and South American refineries. Despite a major planned maintenance shutdown, the refinery processed an average of 17 200 cubic metres per day of crude oil in 1998.

# 4:38pm

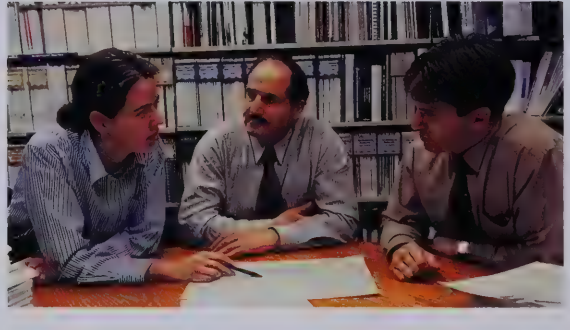


# 4:50pm

High throughputs at Petro-Canada retail outlets keep truckers like Jerry Saldan on the move. The 25-year employee makes four trips daily to the distribution terminal at the Montreal refinery during his 12-hour shifts. Each truckload carries 50 000 litres of gasoline to area retail outlets. Annual retail throughputs averaged 3.5 million litres per site, leading the national integrateds' total networks.

# 5:26pm

Engineering specialist Prad Chaudhuri leads a discussion with engineering and operating staff seeking a process solution in a reforming unit of the Oakville refinery. Employee initiatives — to implement new maintenance procedures and identify and eliminate processing constraints — have resulted in sustained high utilization rates at Petro-Canada refineries.



Keeping close watch on commodity price fluctuations, interest rates and other crucial business conditions is a key responsibility of chief economist Carlos Samur (centre) and advisors Pamela Tisdale and David Quinn.

# 6:31pm

# 8:57pm

Harry Roberts catches up on paperwork following a busy day of meetings late in 1998. The vice-president, finance and planning, and treasurer, played an instrumental role in initiatives to maintain the strength of Petro-Canada's balance sheet during a turbulent year for the oil patch. The Company was able to raise nearly CDN$400 million through a U.S. bond issue in the fourth quarter, using the proceeds to retire Hibernia debt and for general corporate purposes. Other initiatives included sales of the Company's 50 per cent interest in the Petro-Canada Centre office complex in Calgary, for gross proceeds of $200 million, and ICG Propane Inc., for gross proceeds of $177 million.

Gilbert Lavoie serves a nocturnal Petro-Points customer at a SuperRelais outlet in Laval, Quebec. About 800 000 Canadian households joined Petro-Points in 1998, bringing total membership to 3.8 million.

# 12:58am

In the still of a winter night, 250 kilometres west of Edmonton in the Rocky Mountain Foothills, the Petro-Canada operated Hanlan gas plant hums quietly. Recent expansions have boosted plant capacity 25 per cent, to 422 million cubic feet per day.

# 3:30am

Technician Karen Johnson checks a section of pipe during a routine maintenance inspection at the Edmonton refinery. Improved maintenance processes have helped Petro-Canada refineries achieve consistently high throughputs.

# DOWNSTREAM

Petro-Canada's Downstream business focuses on maximizing profitability from strong refining operations, building on its unique retail identity and enhancing participation in niche markets, including specialty lubricants. The Downstream's goal is to consistently achieve returns greater than the cost of capital invested.

The Downstream turned in a near-record performance in 1998, against a challenging business environment of narrowing refining margins, price wars and a downturn in the British Columbia economy. Earnings from Downstream operations of $204 million and record cash flow of $420 million helped Petro-Canada to mitigate the impact of sharply lower crude oil and liquids prices on Upstream earnings.

The Downstream continued to deliver on key operating measures such as refinery utilization and retail throughput per site, while operating and overhead expenses were 5.3 cents per litre, down from 5.4 cents in 1997.

Sales of refined petroleum products were 49 100 cubic metres per day, up from 48 500 cubic metres in 1997. Retail sales were up slightly to 6 036 million litres. Total sales of lubricants increased 8.6 per cent to 669 million litres.

In January 1998, Petro-Canada signed a memorandum of understanding with Ultramar Diamond Shamrock Corporation to pursue a refining and marketing joint venture. The proposed joint venture was terminated in mid-year when it became apparent that the regulatory approval process was likely to be time-consuming and expensive, with no certainty of success.

While Petro-Canada continues to pursue growth opportunities in the Downstream through alliances or other means, the focus in 1999 is to realize full value from capital investments of the past five years.

### REFINING SUCCESS PROMPTS CAPACITY REVISION

Low-cost debottlenecking, coupled with improved maintenance and operating procedures, enabled high utilization once again at Petro-Canada's three refineries. The refineries processed an average of 46 600 cubic metres of crude oil per day, down slightly from 1997 despite major planned maintenance shutdowns.

In recognition of successfully sustaining high utilization rates and increasing throughput over the past several years, Petro-Canada increased the rated capacities of its refineries in the fourth quarter of 1998. Total capacity is now eight per cent higher at 49 000 cubic metres per day. Even with the increase in rated capacity, Petro-Canada refineries posted an impressive 95 per cent utilization rate in 1998.

### INVESTMENTS BOOST PRODUCTION, FLEXIBILITY AND EFFICIENCY

Petro-Canada continues to enhance the production capability, flexibility and environmental performance of its refineries. A catalytic cracker expansion, completed in the fourth quarter, enables the Montreal refinery to produce more high-quality gasoline and improves energy efficiency by up to five per cent. A fractionation tower, installed in 1998, has reduced the benzene content of gasoline produced at the Edmonton refinery by 40 per cent. Benzene-reduction initiatives are also under way at Montreal, Oakville and Mississauga.

### ASPHALT PRODUCTION POSTS RECORD

Running lower-cost heavy crude to make high-quality gasoline is a strength of Petro-Canada's refineries that also enables the company to participate in the buoyant and increasingly specialized asphalt market. In addition to strong gasoline production, the Montreal and Oakville

# PETRO-CANADA'S NEW-IMAGE STATIONS IN URBAN MARKETS SHOWED A 43 PER CENT GAIN IN GASOLINE SALES OVER A THREE-YEAR PERIOD, MORE THAN DOUBLE THE INDUSTRY AVERAGE

refineries each posted record asphalt volumes in 1998. Combined sales exceeded 1.4 billion litres, compared with 1.3 billion litres in 1997.

Resurfacing of major North American road networks is expected to keep asphalt demand strong and Petro-Canada is well positioned to capture a large share of the growing market. Asphalt facilities in Oakville were upgraded in 1997 and similar enhancements will be completed in Montreal in the first half of 1999. Personnel from the two refineries are working to build integrated customer bases and pursue joint regional market development opportunities.

### BECOMING CANADA'S BRAND OF CHOICE

Petro-Canada is Canada's Gas Station and we are determined to be the clear brand of choice in the Canadian marketplace. We are building on our strong connection with the mobile Canadian consumer through innovative products such as Arctic Oil, SuperClean WinterGas, a superior convenience offering and an advertising campaign linked to Petro-Canada's unique Canadian identity.

### SITE THROUGHPUTS REACH A NEW LEVEL

Having led the Canadian industry in retail restructuring during the 1990s, Petro-Canada continues to maximize the productivity of its cross-country retail network of 1 709 outlets.

Retail throughputs reached a record 3.5 million litres per site in 1998, the highest among the national integrated companies' total networks for the fifth consecutive year. The strong throughput performance was anchored by our new-image sites, which achieved average annual throughputs in excess of 6.0 million litres. In 1998, Petro-Canada pumped 8.2 per cent more gasoline from 46 per cent fewer sites than in 1991.

### NEW SITES BRING BOTTOM-LINE BENEFITS

Petro-Canada's attractive new-image retail sites are designed for customer safety and ease of use. The 'starting gate' design of the islands, many offering pay-at-the-pump convenience, moves more customers in and out quickly. Behind the scenes, improved inventory processes and state-of-the-art operating systems also focus on customer convenience. Bright lighting and clear lines of sight from the pump to the attendant maximize safety at night.

Petro-Canada's sites are earning more than just kudos for design. A recent study of 180 Petro-Canada new-image sites in urban markets showed a 43 per cent gain in gasoline sales over a three-year period, more than double the industry average.

At year-end 1998, about 25 per cent of Petro-Canada's 900 company-controlled outlets had been converted to the new-image design, including all sites in Edmonton. Further conversions are planned in 1999, as the Company continues to maximize the value of its most productive assets.

### NON-PETROLEUM REVENUE KEEPS GROWING

Earning revenue from sources other than petroleum is an increasingly important part of the marketing mix for Petro-Canada's retail business. The contribution from non-petroleum products and services has increased nearly 40 per cent since 1992.

In 1998, Petro-Canada added A&W Food Services of Canada Inc. as a fast-food partner and tested marketing concepts in key categories such as gourmet coffee and dairy

**PETRO-CANADA'S NEW-IMAGE RETAIL OUTLETS**

1 Scanning technology allows Guest Service Attendants to process purchases quickly and accurately. Computerized pricing enables more efficient inventory control and better business management.

2 A superior convenience store offering.

3 Pump islands, many with pay-at-the-pump convenience, are designed to move customers in and out quickly.

4 Bright lighting and clear lines of sight from the pump to the attendant are important security features.

5 All grades of Petro-Canada gasoline, squeegees, paper towels and intercoms are available at every position for customer convenience.

products. Petro-Canada's own JavaStop coffee brand was successfully introduced at selected outlets and will be added to more in 1999. Improved inventory processes and aggressive merchandising, including links with seasonal Petro-Points promotions, are expected to boost sales further in 1999.

**PETRO-POINTS PROVE REWARDING**

The unique Petro-Points loyalty program keeps growing, with new rewards, new partners and, most importantly, new members. About 800 000 Canadians became Petro-Points members in 1998, bringing total membership to 3.8 million households. Members can now redeem points for car rentals through Hertz and travel through Air Canada, or take advantage of more immediate rewards such as convenience and automotive products, or discounts on car washes and Certigard car repair services.

**WHOLESALE NETWORK BUILDING ON STRENGTHS**

Petro-Canada continues to build on its strong position in the commercial road transport market. Sales from the Petro-Pass cardlock network were up 3.0 per cent, the seventh consecutive year of growth. Thirteen Petro-Pass sites were added in 1998, bringing the nationwide total to 176.

The new SuperPass credit card provides fleet operators with industry-leading control, convenience and reporting features, and single-card access to Petro-Canada cardlock and retail outlets across Canada, as well as leading U.S. truck stops.

**IMPROVED PERFORMANCE FROM LUBRICANTS**

Increased sales of higher-margin products, and an expanded international supply and distribution agreement with a leading specialty chemicals company, highlighted an improved year for Petro-Canada's lubricants business in 1998. Total sales of lubricants were 669 million litres, up 8.6 per cent over 1997.

In the fourth quarter, Petro-Canada signed an expanded, 15-year supply and distribution agreement with U.S.-based Witco Corporation. The agreement combines Petro-Canada's best-in-class production efficiencies with Witco's global sales and customer service capability. Petro-Canada is now the exclusive supplier of paraffinic white oils to Witco, which will market and distribute the product through its extensive network in North America, Latin America and the Asia-Pacific region.

In 1999, the lubricants business expects to increase sales and improve margins through the Witco agreement, while benefiting from a gradual recovery in base oil margins and a 1998 restructuring program which streamlined manufacturing processes and reduced costs.

# CORPORATE RESPONSIBILITY

Enhancing environment, health and safety performance through disciplined management, and building lasting stakeholder and community partnerships, are essential to Petro-Canada's long-term business success.

### ENVIRONMENT, HEALTH & SAFETY PERFORMANCE IS STRONG

Petro-Canada invested $140 million on environmental initiatives in 1998. Expenditures included equipment to reduce greenhouse gases and other emissions from company-operated facilities and to reduce the benzene content of gasoline produced at Petro-Canada refineries.

Under a Total Loss Management framework, Petro-Canada audited seven major business units and facilities in 1998 for compliance with standards covering environment, health and safety, risk management, loss prevention, process hazards management, process reliability and security management. Action plans have been developed and, in most cases, implemented to address issues identified through the audit process. Six Total Loss Management audits are planned for 1999.

### SUSTAINABLE DEVELOPMENT A KEY TO SUCCESS

Business growth must be linked with environmental and social responsibility to ensure success over the long term.

Working with the Pembina Institute for Appropriate Development, Petro-Canada has applied a Life Cycle Value Assessment to the proposed MacKay River oil sands project. By integrating environmental planning into all aspects of a project from its inception, the Company expects to reduce impacts while improving project economics. One facet involves cogeneration of electricity, which will reduce the need for coal-fired power generation in Alberta. Success has prompted Petro-Canada to apply Life Cycle Value Assessment to other projects.

Early in 1999, Petro-Canada joined 120 international companies in the World Business Council for Sustainable Development, an organization committed to the principles of environmentally sustainable economic growth. Affiliation with the World Business Council will enable Petro-Canada to draw on the expertise of respected companies representing many sectors of the global economy and share in shaping creative alternatives to business and environmental challenges.

### GREENHOUSE GAS REDUCTION EFFORTS RECOGNIZED

Petro-Canada is committed to reducing greenhouse gas emissions from its facilities through decisive, voluntary action. Since 1990, ongoing greenhouse gas emissions from company-operated facilities have been reduced by 1.25 million tonnes per year of carbon dioxide equivalent. In 1997, carbon dioxide equivalent emissions were reduced by 79 800 tonnes, despite a 1.1 per cent increase in oil and gas production and a 0.6 per cent rise in refinery throughput. Gains in energy efficiency during 1997 exceeded Petro-Canada's commitment of a minimum one per cent improvement per year. The Company expects further emissions reductions in 1998 and beyond.

In addition to improving existing operations, Petro-Canada is preparing for an energy future that may be quite different from today. For example, Petro-Canada, Iogen Corporation and the Government of Canada have committed $25 million to build a plant near Ottawa to demonstrate the technical and commercial viability of a new enzyme-based method for producing ethanol fuel from biomass.

World Business Council for Sustainable Development

Affiliation with the World Business Council will enable Petro-Canada to share in shaping creative alternatives to business and environmental challenges.

Imagine

A Caring Company

An active participant in the Imagine campaign, Petro-Canada contributes at least one per cent of pre-tax earnings to Canada's non-profit sector. Employee volunteerism and in-kind donations further strengthen Petro-Canada's role as a caring company.

Over the full ecological cycle, the process results in over 90 per cent less carbon dioxide than production and use of gasoline, and less than crop-based ethanol.

Petro-Canada's greenhouse gas reduction efforts were recognized early in 1999 with a Leadership Award from the Voluntary Challenge and Registry, a national organization dedicated to helping Canada achieve national emissions reduction commitments.

### ADDRESSING AIR QUALITY ISSUES

In the Upstream, Petro-Canada is taking steps to reduce flaring — the controlled burning of solution gas resulting from oil and gas production — at sites identified in a 1998 inventory. At the Jedney natural gas field in northeastern British Columbia, Petro-Canada has found an alternative to flaring by reinjecting carbon dioxide and hydrogen sulphide back into depleted gas wells. On a daily basis, some 58 tonnes of carbon dioxide and 51 tonnes of hydrogen sulphide are prevented from reaching the atmosphere.

In the Downstream, Petro-Canada refineries are working to reformulate gasolines for the next century. Proposed federal regulations for sulphur content in gasoline call for reductions to 150 parts per million by 2002 and 30 parts per million by 2005. Petro-Canada supports harmonization with pending U.S. standards, which would allow Canadian refiners time to evaluate and implement emerging, more cost-effective sulphur-reduction technologies.

During 1998, Petro-Canada invested $21 million to reduce the benzene content of its gasolines, to meet new federal regulations. A fractionation tower was installed during a maintenance shutdown at the Edmonton refinery, and benzene-reduction work is under way at the Oakville and Montreal refineries as well as the lubricants facility in Mississauga.

### STRENGTHENING STAKEHOLDER RELATIONSHIPS

Petro-Canada took important steps in 1998 to strengthen relationships with the communities where the Company operates. Examples include:

- a major impact assessment of sour gas development in the Wildcat Hills area;
- continued relationship building with communities near the Oakville, Montreal and Edmonton refineries and the Mississauga lubricants facility; and,
- launching a program to enhance job-readiness of First Nations' residents in northeastern British Columbia. The program will be extended in 1999 to communities near the proposed MacKay River oil sands development.

### SAFEGUARDING PEOPLE A 1999 PRIORITY

Employee health and safety is a keenly felt responsibility at Petro-Canada and will be the focus of a continuous improvement effort in 1999. A five-year downward trend in recordable injury frequency was interrupted in 1998. Recordable injury frequency (work-related injuries requiring more than first aid) was 1.42 per 200 000 person-hours, compared with 0.98 in 1997. The employee disabling frequency (injuries that result in time away from work) per 200 000 person-hours was 0.52, up from 0.31.

To improve its health and safety performance in 1999, Petro-Canada has undertaken several initiatives including:

- analysis of all 1998 Upstream recordable injuries and work-related absences;

- comprehensive inspections of near-miss and event reviews at the Montreal refinery; and,
- In Ontario, management is inspecting distribution sites and actively communicating safety expectations.

Similarly, an ongoing Move Smart program is aimed at reducing musculoskeletal injuries on and off the job by increasing employee awareness and teaching proper lifting and movement techniques. Industry-wide, repetitive strain and related injuries account for 40 to 45 per cent of employee absence costs.

### COMMUNITY INVESTMENT INTRODUCES SOCIAL VISION

Petro-Canada recognizes the value of building effective partnerships with the not-for-profit sector across Canada. In 1998, the Company invested $4.5 million to assist more than 350 organizations in four funding categories — education; environment; health and community services; and arts and culture.

Contributing a minimum of one per cent of pre-tax earnings to charitable endeavours, as Petro-Canada has done since 1989, has earned recognition from the Canadian Centre for Philanthropy as an Imagine Caring Company.

Business strategies, facility locations, community needs and employee interests determine where Petro-Canada invests its money. To guide its decisions, the Company introduced a social vision in 1998, following extensive research and consultation by an employee team. The social vision defines Petro-Canada's community investment focus as "the development of Canadian talent, expertise and innovation through education." A portion of the budget will continue to address more basic community needs such as poverty and homelessness.

Some educational initiatives in 1998 included:

- Enlarging the scope of the Petro-Canada Young Innovator Awards into the health sector. Since 1994, the Company has invested nearly $3 million to support innovative research by 17 young faculty members at Canadian universities, colleges and institutes.
- Launching the Destination Conservation Program for teachers and students in the Halton School Board in Ontario, to help promote electricity/water conservation and waste reduction in their schools.
- Establishing a business training centre at Montmorency College in Laval, Quebec, to prepare students for careers in retail trade.
- Supporting, as the exclusive industry sponsor, chairs for Women in Science and Engineering at Memorial University in Newfoundland and the University of Calgary.
- Partnering with the Ontario Ministry of Environment and local schools to study the impact of air emissions on the Canadian climate.
- Assisting 23 students toward completing degrees in areas applicable to the oil and gas industry through the Petro-Canada Aboriginal Education Awards.
- Sponsoring 150 Canadian athletes and coaches with a $500 000 disbursement from the Petro-Canada Olympic Torch Scholarship Fund. Since 1988, Petro-Canada has contributed more than $4 million to enable Canadian athletes and coaches to pursue their education while training for competition.

Investing in Canadian communities is one aspect of the Company's social vision. Equally important is the involvement of Petro-Canada's employees in those communities. More than 200 organizations in which Petro-Canada employees are active volunteers received Company grants in 1998.

In 1998, corporate, employee and retiree contributions to the United Way/Centraide exceeded $1 million. Employees continued to demonstrate their capacity for giving in other ways, responding swiftly and generously to raise funds, which Petro-Canada matched, for victims of Eastern Canada's ice storm and those left homeless in the wake of Hurricane Mitch in Central America.

This Management's Discussion and Analysis and the Petro-Canada annual report of which it forms a part contain forward-looking statements, including references to: future capital and other expenditures (including the amount, nature and sources of funding thereof); oil and gas production levels and the sources of growth thereof; tax and royalty rates; oil and gas prices; the Canadian dollar exchange rate; interest rates; refining and marketing margins; demand for refined petroleum products; planned facilities construction and expansion; retail site throughputs; pre-production and operating costs; reserves and probable reserves; natural gas export capacity; results of exploration and development activities; acquisition and disposition of resource properties; dates by which certain areas will be developed or will come on stream; and costs and timing of addressing Year 2000 matters. These forward-looking statements are subject to known and unknown risks and uncertainties and other factors which may cause actual results, levels of activity and achievements to differ materially from those expressed or implied by such statements. Such factors include, but are not limited to: general economic, market and business conditions; industry capacity; competitive action by other companies; fluctuations in oil and gas prices; refining margins and marketing margins; the ability to produce and transport crude oil and natural gas to markets; the results of exploration and development drilling and related activities; fluctuation in foreign currency exchange rates; actions by governmental authorities including increases in taxes; changes in environmental and other regulations; risks attendant with oil and gas operations; disruption to the Company's operations due to untimely or incomplete resolution of Year 2000 issues by the Company and other entities with which it has material relationships; and other factors, many of which are beyond the control of Petro-Canada.

This Management's Discussion and Analysis provides management's analysis of the financial condition and results of operations of Petro-Canada for the year ended December 31, 1998, compared with the year ended December 31, 1997. The analysis focuses on strategies and performance as they relate to the value drivers that management considers important to Petro-Canada's financial performance and ability to create superior shareholder returns.

Petro-Canada follows the principles of value-based management, assessing the value-creating potential of existing businesses and new opportunities and allocating resources to those offering the greatest potential. The Company evaluates the performance of all its assets on an ongoing basis, and divests or acquires assets where it believes it can improve the capability of its business portfolio to create value.

A central component of Petro-Canada's evaluation process is determining and managing those controllable factors that drive value in the organization. The management of these value drivers allows the Company to assess its relative performance and optimize its business portfolio to achieve its objective of superior shareholder returns. A three-year analysis of the Company's performance is summarized in "Value Drivers" on pages 34 and 35. A glossary of financial terms and ratios appears on the inside back cover of this annual report.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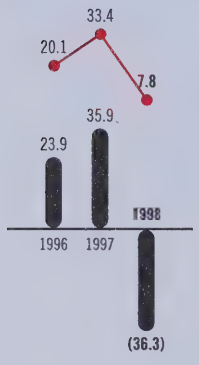



**SHAREHOLDER VALUE**

● **THREE-YEAR AVERAGE** (per cent)

■ **ONE-YEAR RETURN** (per cent)

Objective: deliver superior shareholder returns over the long term

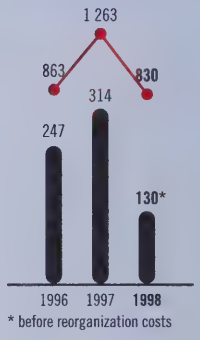
- total returns to shareholders averaged 7.8% over the past three years (including dividend reinvestment)
- dividend yield at year end was 2.0%
- average daily trading volume was approximately one million shares

**OPERATING EARNINGS AND CASH FLOW**

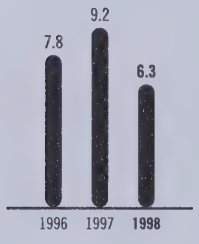
● **CASH FLOW** ($ millions)

■ **EARNINGS FROM OPERATIONS** ($ millions)

- significant reductions in 1998 were primarily due to low crude and liquids prices
- cash flow in 1998 also reflects higher current income taxes
- Downstream earnings and cash flow remained strong




* before reorganization costs




**INTEREST COVERAGE - (EBITDAX)**

■ **INTEREST COVERAGE RATIO** (times)

Objective: maintain interest coverage ratio consistent with integrated peers rated A- or better

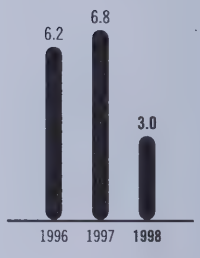
- measures the extent to which earnings before interest, income taxes, depreciation, depletion and amortization and exploration expenses cover interest charges
- declined as a result of weaker earnings and increased interest expense. Interest expense increased because of the declining Canadian dollar

**RETURN ON CAPITAL EMPLOYED (ROCE)**

■ **RETURN ON CAPITAL EMPLOYED** (per cent)

Objective: increase ROCE to a minimum of 10% over the next five years

- earnings were reduced in 1998 by an exceptionally weak crude oil price
- return on capital employed has been constrained by capital-intensive investments that are not yet mature
- Downstream operating ROCE was 10.3% in 1998



**DEBT TO CASH FLOW AND DEBT TO DEBT PLUS EQUITY**

● **DEBT TO CASH FLOW** (times)

■ **DEBT TO DEBT PLUS EQUITY** (per cent)

Objective: maintain a strong balance sheet that will provide the financial flexibility to pursue growth initiatives

- target maximum for debt to cash flow is 2.0 and for debt to debt plus equity is 30%
- ratios weakened in 1998 due to currency related debt increase and crude oil price related cash flow decline
- debt increased $91 million in 1998 as a result of the declining Canadian dollar

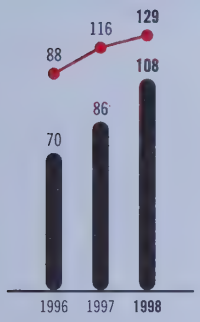
**OIL AND GAS PRODUCTION**

■ **UPSTREAM PRODUCTION**

(thousands of barrels of oil equivalent per day)

Objective: profitable oil and gas production growth

- increased production in 1998 despite net divestment of Western Canada non-core assets which produced 6 800 barrels of oil equivalent per day
- new production at Hibernia more than offset declining production in Western Canada
- expect production to exceed 200 000 barrels per day by 2001




**WESTERN CANADA PROVED RESERVE REPLACEMENT BY EXPLORATION AND DEVELOPMENT** (excluding Syncrude)

- **NATURAL GAS** (per cent)
- **TOTAL WESTERN CANADA CONVENTIONAL** (per cent)

Objective: profitable expansion of reserves

- improved Western Canada conventional proved reserves replacement to 108%
- natural gas reserve replacement in Western Canada was a record 129%, with proved additions of 340 billion cubic feet

**WESTERN CANADA CONVENTIONAL PROVED THREE-YEAR AVERAGE FINDING AND DEVELOPMENT COSTS**

- **TOTAL WESTERN CANADA CONVENTIONAL** ($ per barrel of oil equivalent)
- **NATURAL GAS** ($ per thousand cubic feet of gas equivalent)

Objective: attain first quartile finding and development costs

- held Western Canada three-year average finding and development costs for conventional proved reserves flat
- maintained competitive three-year average gas finding and development costs

**UPSTREAM UNIT OPERATING AND OVERHEAD COSTS** (excluding Syncrude)

- **OPERATING COSTS** ($ per barrel of oil equivalent)
- **OVERHEAD COSTS** ($ per barrel of oil equivalent)

Objective: attain first quartile operating and overhead costs

- unit operating costs were temporarily increased by Hibernia, which next year should reduce them
- unit overhead costs fell, primarily because of Hibernia

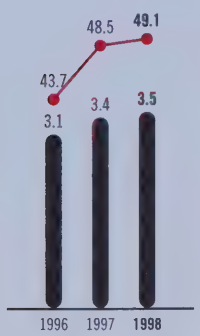
**REFINERY UTILIZATION**

- **AVERAGE REFINERY UTILIZATION** (per cent)

Objective: maintain industry-leading asset utilization rates

- continued to run refineries very close to capacity

* increased refinery capacity by 8% in 1998 due to process improvements




**PETROLEUM PRODUCT SALES/ RETAIL THROUGHPUT PER SITE**

- **DAILY SALES OF REFINED PETROLEUM PRODUCTS** (thousands of cubic metres/day)
- **RETAIL THROUGHPUTS PER SITE** (millions of litres/year)

Objective: achieve profitable volume growth and continually increase throughputs per retail site

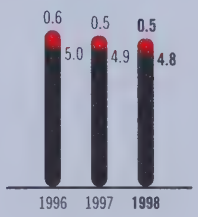
- Petro-Canada's retail throughputs per site lead the Canadian national integrateds
- three-year growth in throughputs has exceeded the industry average
- refined petroleum product sales grew 12% between 1996 and 1998

**DOWNSTREAM UNIT OPERATING AND OVERHEAD COSTS**

- **OPERATING COSTS** (cents per litre)
- **OVERHEAD COSTS** (cents per litre)

Objective: continue to manage controllable expenses aggressively

- reduced unit operating costs despite inflation



## RESULTS OF OPERATIONS

Petro-Canada's financial results are significantly influenced by business environment factors including crude oil and natural gas prices, refined product margins, the Canadian dollar exchange rate and the demand for refined petroleum products.

### BUSINESS CONDITIONS IN 1998

The prices of crude oil and natural gas have a substantial effect on the financial results of the upstream oil and gas sector. In 1998, a combination of sharply lower Asian economic growth, unseasonably warm winter weather and OPEC's decision in late 1997 to raise crude production quotas by 2.5 million barrels per day resulted in a severe decline in oil prices. The price of West Texas Intermediate (WTI) crude oil averaged U.S.$14.40 per barrel on the New York Mercantile Exchange (NYMEX), a decrease of 30 per cent from the 1997 average price of U.S.$20.62. International oil prices were exceedingly volatile, with the price of WTI fluctuating between a high of U.S.$17.82 on January 29 and a low of U.S.$10.72 on December 10, its lowest value since 1975. In an attempt to stem the price decline, Saudi Arabia, Venezuela and Mexico met in March and again in June. These meetings led to commitments by OPEC and some non-OPEC countries to cut production by a total of 3.1 million barrels per day over the second half of 1998. However, the market reacted to these commitments with skepticism. The resulting production cuts proved inadequate to raise prices during 1998 in the face of much lower growth in market demand and the accumulated overhang in refined product inventories.

The effect of the fall in international oil prices on Canadian crude prices was partially cushioned by the decline in the value of the Canadian dollar relative to the U.S. currency during 1998. The value of the Canadian dollar fell from a high of 71.05 U.S. cents on March 11 to 63.43 U.S. cents on August 27, an all-time low. As a result of these two factors, the Canadian price for benchmark light crude oil averaged $20.36 per barrel, down 27 per cent from 1997. The domestic light/heavy oil average price differential narrowed to $5.71 per barrel from $6.74 in 1997 as some producers responded to low crude prices by shutting in production, particularly of heavy oils. In December, the differential averaged $3.39 per barrel.

Prices of natural gas liquids closely track those of crude oil. As a result, North American propane and butane prices reached very low levels in 1998. Moreover, the combination of low liquids prices and relatively strong natural gas prices severely squeezed straddle plant margins.

On an average annual basis, natural gas prices in Canada remained virtually flat relative to 1997. In 1998, the Alberta Reference Price averaged $2.02 per thousand cubic feet at the plant gate, compared with $2.05 a year ago. Downward pressures on Canadian natural gas prices, caused by warmer weather relative to 1997, were offset by upward pressures resulting from increases in pipeline capacity. This expanded capacity opened new outlets for Canadian gas that helped reduce the price discount for Canadian natural gas compared with natural gas prices in the rest of North America. In late 1998, TransCanada PipeLines and Northern Border Pipeline expanded their export capacities by 0.4 billion cubic feet per day and 0.7 billion cubic feet per day, respectively. During 1998, Canadian natural gas exports to the United States averaged approximately 8.5 billion cubic feet per day.

In the downstream industry, the key external factors affecting financial results are the pattern of changes in and the volatility of crude oil prices, overall demand for refined petroleum products, the utilization of refining and marketing capacity and the degree of market competition. Low crude prices motivated refiners throughout North America to run their plants at record levels in 1998, especially during the summer. This unusually high production, in combination with warmer-than-normal weather and slower overall growth in refined product sales, led to a large build-up in crude oil and product inventories and to an erosion in refining and marketing margins as the year progressed. Refined petroleum product sales in Canada grew by approximately 2.0 per cent in 1998, compared with 3.7 per cent in 1997.

## SENSITIVITIES AFFECTING NET EARNINGS

The following table shows the after-tax effects that changes in certain factors would have had on Petro-Canada's 1998 net earnings had these changes occurred. These calculations are based on business conditions and production and sales volumes realized by the Company in 1998.

| Factor | 1998 average | Increase | Approximate Increase (Decrease) in 1998 Net Earnings[1] (millions of Canadian dollars) | December 1998 average |
|---|---|---|---|---|
| **UPSTREAM SECTOR** | | | | |
| WTI benchmark crude oil price | U.S. $14.40 (per barrel) | U.S. $1.00 (per barrel) | 26 | U.S. $11.31 (per barrel) |
| Price received for natural gas[2] | $1.96 (per thousand cubic feet) | $0.10 (per thousand cubic feet) | 10 | $2.50 (per thousand cubic feet) |
| Production of crude oil and liquids | 101 100 (barrels per day) | 2 000 (barrels per day) | 1 | 103 100 (barrels per day) |
| Production of natural gas available for sale | 722 million (cubic feet per day) | 10 million (cubic feet per day) | 1 | 763 million (cubic feet per day) |
| **DOWNSTREAM SECTOR** | | | | |
| Average sale price of gasoline[3] | 23 cents (per litre) | 1 cent (per litre) | 46 | 20 cents (per litre) |
| Average sale price of total distillates[3,4] | 20 cents (per litre) | 1 cent (per litre) | 36 | 18 cents (per litre) |
| Refining and supply margin[5] | 1.7 cents (per litre) | 0.1 cent (per litre) | 10 | 0.6 cents (per litre) |
| Marketing margin[5] | 5.6 cents (per litre) | 0.1 cent (per litre) | 7 | 5.9 cents (per litre) |
| Light crude oil/heavy crude oil differential | $5.71 (per barrel) | $1.00 (per barrel) | 14 | $3.39 (per barrel) |
| **CORPORATE** | | | | |
| Canadian dollar exchange rate ($U.S.)[6] | U.S. $0.6750 | U.S. $0.01 | (5) | U.S. $0.6484 |

1 The impact of a change in one factor may be compounded or offset by changes in the factors noted and in other factors. This table does not consider the impact of any interrelationship between the factors. The application of these factors may not necessarily lead to an accurate prediction of future results of operations. The Company undertakes risk management initiatives from time to time which may affect these sensitivities.

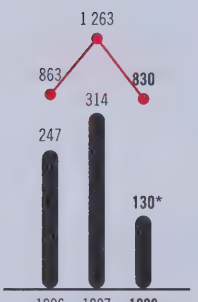
2 Net of decrease of $3 million in earnings from straddle operations.

3 Average sale price of gasoline and distillates does not include federal excise tax or provincial motor fuel taxes.

4 Includes diesel oils, heating oils and aviation jet fuels.

5 Revenue minus cost of sales.

6 A weakening U.S. dollar versus the Canadian dollar has a negative effect on Petro-Canada's earnings. The decline of the Canadian dollar versus the U.S. dollar caused the Company's debt to increase by $91 million in 1998.




* before reorganization costs

**OPERATING EARNINGS AND CASH FLOW**

● **CASH FLOW** ($ millions)

■ **EARNINGS FROM OPERATIONS** ($ millions)

## SUMMARIZED FINANCIAL RESULTS

| (millions of dollars, unless otherwise indicated) | 1998 | 1997 | 1996 |
|---|---|---|---|
| Revenue | **5 016** | 6 096 | 5 607 |
| Earnings from operations before reorganization costs | **130** | 314 | 247 |
| Reorganization costs | **(42)** | — | — |
| Gains (losses) on sale of assets | **7** | (8) | — |
| Net earnings | **95** | 306 | 247 |
| Earnings per share (dollars) | **0.35** | 1.13 | 0.94 |
| Cash flow[1] | **830** | 1 263 | 863 |
| Cash flow per share (dollars) | **3.06** | 4.66 | 3.29 |
| Return on capital employed (per cent) | **3.0** | 6.8 | 6.2 |
| Average capital employed | **5 536** | 5 406 | 5 019 |
| Return on equity (per cent) | **2.4** | 8.0 | 7.3 |
| Debt | **1 829** | 1 741 | 1 709 |
| Cash and short-term investments | **431** | 75 | 32 |

1 In Management's Discussion and Analysis, cash flow is defined as cash flow from operations before changes in non-cash working capital items.

### 1998 Compared with 1997

Petro-Canada had weaker financial results in 1998 than in 1997, with net earnings of $95 million ($0.35 per share), compared with a record $306 million ($1.13 per share) in 1997. There were several one-time items affecting 1998 results, including a reorganization charge of $42 million after tax taken in the second quarter associated with a reorganization of the Downstream administration and the cancellation of a proposed joint venture with Ultramar Diamond Shamrock Corporation, a fourth quarter provision for losses of $32 million after tax relating to the planned disposal of closed retail sites and gains of $39 million after tax from the sale of non-core assets. Earnings from operations before these items totalled $130 million ($0.48 per share) in 1998, compared with $314 million ($1.16 per share) the year earlier. A sharp drop in the price of crude oil and liquids in 1998 had a significant impact on results. Revenue was $5 016 million in 1998, versus $6 096 million , and the cost of crude oil and product purchases was $2 413 million, compared with $3 183 million in 1997. Producing, refining and marketing costs declined by $43 million, mainly as a result of the sale of ICG Propane. Depreciation, depletion and amortization charges were $530 million, up $48 million from 1997 mostly due to new production from Hibernia. Hedging activities reduced earnings by $21 million after tax, whereas they increased earnings by $9 million after tax in 1997. Cash flow decreased to $830 million ($3.06 per share) in 1998, down from $1 263 million ($4.66 per share) a year earlier, primarily as a result of lower earnings and higher current income taxes.

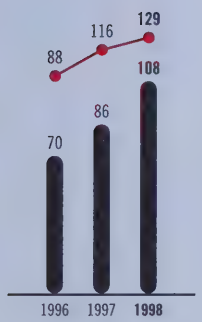
Petro-Canada's return on capital employed in 1998 was 3.0 per cent, compared with 6.8 per cent in 1997. Return on equity was 2.4 per cent in 1998, down from 8.0 per cent in 1997.

**OIL AND GAS PRODUCTION**

■ **UPSTREAM PRODUCTION**
(thousands of barrels of oil equivalent per day)

## UPSTREAM SECTOR RESULTS

| (millions of dollars, unless otherwise indicated) | 1998 | 1997 | 1996 |
|---|---|---|---|
| Revenue including inter-segment sales | **1 436** | 1 829 | 1 702 |
| Earnings from operations | **29** | 188 | 192 |
| Gains (losses) on asset sales | **30** | (2) | 4 |
| Net earnings | **59** | 186 | 196 |
| Cash flow | **516** | 900 | 655 |
| Return on capital employed (per cent) | **1.8** | 5.7 | 6.5 |
| Cash flow return on capital employed (per cent) | **15.7** | 27.4 | 21.6 |
| Average capital employed | **3 288** | 3 284 | 3 028 |




**WESTERN CANADA PROVED RESERVE REPLACEMENT BY EXPLORATION AND DEVELOPMENT**
(excluding Syncrude)

● **NATURAL GAS**
(per cent)

■ **TOTAL WESTERN CANADA CONVENTIONAL**
(per cent)

**1998 Compared with 1997**

The Upstream sector earned $29 million from operations in 1998, down significantly from $188 million in 1997, as sharply lower crude oil prices, increased depletion, depreciation and amortization charges and the Company's hedging activities more than offset higher liquids production. Hedging activities, mainly forward sales of the Canadian dollar, reduced the Upstream sector's earnings by $19 million compared with an increase of $6 million in 1997. The effect of relatively high natural gas prices and falling natural gas liquids prices significantly reduced margins at the Company's Empress straddle plant.

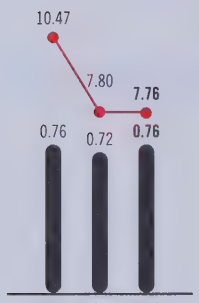
Upstream cash flow was $516 million, down from $900 million in 1997, reflecting lower earnings and higher current income taxes. Higher current taxes resulted from the Company's Petro-Canada Oil and Gas (PCOG) Partnership in Western Canada. For the full year 1998, the effect of the PCOG partnership was to decrease cash flow by $75 million, while in 1997 an income tax deferral increased cash flow by $145 million.

Daily liquids and natural gas production averaged 173 300 barrels of oil equivalent in 1998, up from 171 100 a year earlier. Natural gas production declined to an average of 722 million cubic feet per day, primarily due to the net sale of approximately 34 million cubic feet per day of production. Total conventional crude oil and liquids production averaged 75 900 barrels per day, up from 70 200 barrels per day in 1997 as new production from Hibernia and the Njord field offshore Norway more than offset lower volumes in Western Canada.

One of Petro-Canada's major sources of future oil production and reserves growth will be the Grand Banks, offshore Newfoundland, and the Company views the Western Canadian Sedimentary Basin as being mature for conventional oil. As a result, Petro-Canada is making a staged exit from conventional oil production in Western Canada, where conventional crude oil and liquids production averaged 51 000 barrels per day in 1998, down from 57 500 barrels per day in 1997. The decline in average production in 1998 resulted from net asset sales of 3 400 barrels per day and from natural decline. Western Canada crude oil and liquids production was approximately 37 000 barrels per day at the end of 1998, reflecting asset sales made late in 1998.

The Syncrude Joint Venture in northern Alberta is the world's largest oil sands mining development. Petro-Canada's 12 per cent interest in the venture yielded an average of 25 200 barrels per day of synthetic crude oil in 1998, compared with 24 900 barrels per day in 1997. Operations at Syncrude contributed $29 million to Upstream earnings, down from $60 million in 1997. Petro-Canada's return on the capital employed in the Joint Venture was 10.2 per cent, compared with 24.2 per cent in 1997.

Petro-Canada added 145 million barrels of oil equivalent of proved reserves through exploration and development in 1998, including 49 million barrels of oil equivalent in Western Canada conventional operations, 12 million barrels at Hibernia and 84 million barrels at Syncrude. Conventional reserves replacement by exploration and development improved significantly as a result of these additions. In Western Canada, conventional reserves replacement by exploration and development increased to 108 per cent in 1998 from 86 per cent in 1997. Over 75 per cent of the Western Canada conventional reserves additions were natural gas and associated liquids. Consistent with the Company's focus on growing its natural gas reserves and maintaining production, Petro-Canada replaced 129 per cent of its 1998 gas production through exploration and development, up from 116 per cent in 1997. The Company books its reserves according to United States Securities and Exchange Commission (SEC) rules.




**WESTERN CANADA CONVENTIONAL PROVED THREE-YEAR AVERAGE FINDING AND DEVELOPMENT COSTS**

- **TOTAL WESTERN CANADA CONVENTIONAL** ($ per barrel of oil equivalent)
- **NATURAL GAS** ($ per thousand cubic feet of gas equivalent)

**UPSTREAM UNIT OPERATING AND OVERHEAD COSTS**

(excluding Syncrude)

- **OPERATING COSTS** ($ per barrel of oil equivalent)
- **OVERHEAD COSTS** ($ per barrel of oil equivalent)

Petro-Canada's Hibernia reserves reflect an anticipated total gross recovery of 615 million barrels (123 million barrels net to Petro-Canada) based on the owners' consensus view. Petro-Canada's share of the remaining Hibernia reserves comprises 15.6 million barrels of proved reserves and 102.4 million barrels of probable reserves. The Company's share of cumulative production to year-end 1998 was 5.0 million barrels. Petro-Canada's estimate of proved reserves is based on reserves attributed to primary recovery in drilled fault blocks plus incremental recovery in fault blocks demonstrating response to water or gas injection.

Petro-Canada's three-year average finding and development costs for the period 1996 to 1998 for Western Canada conventional proved reserves were $7.76 per barrel of oil equivalent. For natural gas, the three-year average was $0.76 per thousand cubic feet of gas equivalent. The Company's 1998 Western Canada conventional proved finding and development costs declined to $7.40 per barrel of oil equivalent from $7.66 in 1997. Natural gas finding and development costs rose from $0.70 per thousand cubic feet of gas equivalent in 1997 to $0.79 in 1998.

### Petro-Canada Conventional Netbacks

| (dollars per barrel of oil equivalent) | 1998 | 1997 | 1996 |
|---|---|---|---|
| Revenue[1] | **18.17** | 21.66 | 21.84 |
| Royalties | **2.94** | 4.61 | 4.38 |
| Operating expenses | **4.64** | 4.29 | 4.28 |
| Netback | **10.59** | 12.76 | 13.18 |
| Overhead expenses | **0.77** | 0.80 | 0.70 |
| Netback after overhead expenses | **9.82** | 11.96 | 12.48 |

1 Excludes effects of hedging activities.

Upstream revenues in 1998 were down significantly from 1997 as a result of lower crude oil prices, which also reduced royalties. Hibernia had a significant impact on 1998 netbacks. Its 1998 royalties and overhead expenses were each $0.15 per barrel, decreasing unit costs in both of these categories. Hibernia increased Upstream unit operating costs in 1998 but is expected to reduce them in 1999 and beyond. Hibernia is projected to reach plateau production in mid-1999 and experience operating costs of less than $3.00 per barrel while at plateau production.

Charges for depreciation, depletion and amortization (DD&A), including site restoration and other capital charges, rose to $6.92 per barrel of oil equivalent from $5.84 in 1997 reflecting Hibernia DD&A of $10.61 per barrel and Western Canada DD&A of $6.59 per barrel.

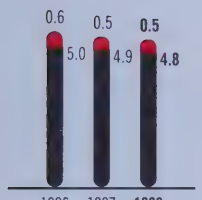
Excluding the effect of the Company's hedging activities, Petro-Canada's average price realized for crude oil and field natural gas liquids production was $17.71 per barrel in 1998, down 31 per cent from $25.49 in 1997. The Company's average price received for natural gas was $1.96 per thousand cubic feet, up from $1.85 in 1997.

## DOWNSTREAM SECTOR RESULTS

| (millions of dollars, unless otherwise indicated) | 1998 | 1997 | 1996 |
|---|---|---|---|
| Revenue including inter-segment sales | **4 068** | 4 980 | 4 559 |
| Earnings from operations | **204** | 225 | 130 |
| Losses on sale of assets | **(35)** | (6) | (3) |
| Net earnings | **169** | 219 | 127 |
| Cash flow | **420** | 415 | 243 |
| Operating return on capital employed (per cent) | **10.3** | 11.4 | 6.9 |
| Average capital employed | **1 981** | 1 970 | 1 873 |

### 1998 Compared with 1997

The slightly weaker performance in earnings from operations and operating return on capital employed for Petro-Canada's Downstream in 1998 was mainly the result of lower industry refining margins.



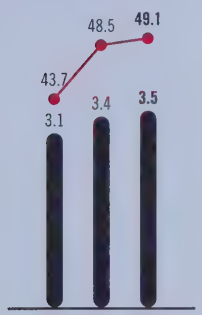

**DOWNSTREAM UNIT OPERATING AND OVERHEAD COSTS**

■ **OPERATING COSTS**
(cents per litre)

■ **OVERHEAD COSTS**
(cents per litre)

* increased rated refinery capacity by 8% in 1998 due to process improvements

■ **AVERAGE REFINERY UTILIZATION**
(per cent)




**PETROLEUM PRODUCT SALES/ RETAIL THROUGH-PUT PER SITE**

● **DAILY SALES OF REFINED PETROLEUM PRODUCTS**
(thousands of cubic metres/day)

■ **RETAIL THROUGH-PUT PER SITE**
(millions of litres/year)

Refining margins in the United States declined significantly in 1998, which led to a reduction in refining margins in Central and Eastern Canada. The negative effect of lower refining margins on Petro-Canada's 1998 Downstream earnings was partially offset by improvements in sales mix and expense management. Refining and supply earnings from operations fell to $120 million from $143 million in the previous year. The Company recorded a provision for losses of $32 million after tax in the fourth quarter of 1998 relating to the planned disposal of closed retail sites.

In a difficult business environment for refining, Petro-Canada is focusing on profitable volume growth and sales mix improvement. Sales of refined petroleum products were 49 100 cubic metres per day, up marginally from 48 500 cubic metres per day in 1997. Over the past three years, Petro-Canada's refined petroleum products sales have increased by 12 per cent, which was more than the national industry average.

Petro-Canada has achieved high rates of refinery utilization as a result of debottlenecking of secondary processing units, improvements in the reliability of refinery operations and more efficient shutdown processes. A reassessment of refinery capacities has resulted in an 8 per cent increase in the combined rated capacities of Petro-Canada's three refineries. Total rated refinery capacity is now approximately 49 000 cubic metres or 308 000 barrels per day, up from the previous 45 400 cubic metres or 286 000 barrels per day.

Total sales of lubricants in 1998 increased 8.6 per cent from the previous year. The Company signed an expanded supply and distribution agreement in 1998 under which Witco Corporation, a specialty chemicals company, becomes Petro-Canada's main global distributor of white oil products.

Marketing earnings were $84 million, up from $82 million in 1997. Retail throughput per site averaged 3.5 million litres in 1998, an increase of three per cent from 3.4 million litres the prior year. As of the end of December 1998, approximately 3.8 million Canadian households were members of Petro-Points, the Company's proprietary loyalty program, compared with 3 million at the end of 1997.

Operating and overhead expenses were 5.3 cents per litre, continuing their downward trend from 5.4 cents in 1997 and 5.6 cents per litre in 1996.

### Joint Venture

In January 1998, Petro-Canada signed a memorandum of understanding with Ultramar Diamond Shamrock Corporation to form a refining and marketing joint venture in Canada, the northeastern United States and Michigan. The proposed joint venture was abandoned in mid-year when it became apparent to both companies that the regulatory approval process was likely to be time-consuming and expensive with no certainly of success.

## SHARED SERVICES RESULTS

| (millions of dollars) | 1998 | 1997 | 1996 |
|---|---|---|---|
| Net expenses before reorganization costs | **(103)** | (99) | (75) |
| Gains (losses) on sale of assets | **12** | – | (1) |
| Net expenses | **(91)** | (99) | (76) |
| Cash flow | **(68)** | (52) | (35) |

### 1998 Compared with 1997

Shared Services is structured as a cost centre which includes interest expense, general corporate revenues and expenditures and investment income. The net expenses of Shared Services in 1998 decreased to $91 million, from $99 million in 1997, due primarily to the gain on the sale of the Company's interest in the Petro-Canada Centre offset by higher amortization of foreign exchange translation losses associated with U.S. dollar denominated debt. The increase in Shared Services expenses between 1996 and 1997 was due to lower interest income, higher amortization of foreign exchange translation losses associated with U.S. dollar denominated debt and increased overhead costs.

## LIQUIDITY AND CAPITAL RESOURCES

### Summary of Cash Flows

| (millions of dollars) | 1998 | 1997 | 1996 |
|---|---|---|---|
| **OPERATING ACTIVITIES** | | | |
| Cash flow | **830** | 1 263 | 863 |
| Decrease (increase) in operating working capital and other | **238** | (167) | 59 |
| Cash flow from operating activities | **1 068** | 1 096 | 922 |
| **INVESTING ACTIVITIES** | **(628)** | (863) | (1 611) |
| **FINANCING ACTIVITIES AND DIVIDENDS** | **(84)** | (190) | 678 |
| **INCREASE (DECREASE) IN CASH AND SHORT-TERM INVESTMENTS** | **356** | 43 | (11) |

### OPERATING ACTIVITIES

Cash flow in 1998 was $830 million, down from $1 263 million in 1997, reflecting lower earnings and higher current taxes, especially in the Upstream sector. The Downstream inventory accounting method prescribed for tax purposes resulted in a decrease in current income taxes of $66 million in 1998 and $46 million in 1997.

A decrease in operating working capital increased cash flow from operating activities by $238 million to $1 068 million, whereas an increase in operating working capital in 1997 of $167 million decreased cash flow from operating activities. In 1998, the change in operating working capital was mainly due to decreased accounts receivable and income taxes recoverable and an increase in income taxes payable, partially offset by a decrease in accounts payable.

### INVESTING ACTIVITIES

#### Capital and exploration expenditures

| (millions of dollars) | 1998 | 1997 | 1996 |
|---|---|---|---|
| **UPSTREAM**[1] | | | |
| Western Canada oil and gas exploration and development | **361** | 321 | 285 |
| Hibernia and Terra Nova | **225** | 182 | 148 |
| Other Grand Banks | **20** | 23 | 2 |
| International | **72** | 70 | 94 |
| Syncrude and other oil sands | **70** | 52 | 28 |
| Property acquisitions | **43** | 112 | 55 |
| Other | **27** | 45 | 37 |
| | **818** | 805 | 649 |
| **DOWNSTREAM** | | | |
| Refining and supply | **125** | 75 | 66 |
| Marketing | **133** | 116 | 108 |
| Lubricants | **15** | 20 | 106 |
| Other | **3** | 4 | 2 |
| | **276** | 215 | 282 |
| **SHARED SERVICES** | **22** | 29 | 28 |
| Property, plant and equipment and exploration | **1 116** | 1 049 | 959 |
| Deferred charges and other assets | **17** | 15 | 9 |
| **TOTAL** | **1 133** | 1 064 | 968 |

1 Includes exploration expenses charged to earnings of $95 million in 1998, $75 million in 1997 and $60 million in 1996.

Total capital expenditures on property, plant, equipment, exploration and deferred charges and other assets were $1 133 million in 1998, up from $1 064 million in 1997. The increase was incurred in the Upstream mainly at Terra Nova and in the Downstream to meet benzene in gasoline regulations and for the catalytic cracker expansion at the Montreal refinery.

Expenditures on property, plant and equipment and exploration in the Upstream sector totalled $818 million, compared with $805 million in 1997. Exploration and development spending in Western Canada was $361 million in 1998, up $40 million from the prior year. Grand Banks investments amounted to $245 million, compared with $205 million in 1997, due to higher development expenditures at Terra Nova which more than offset decreased expenditures at Hibernia. Syncrude and other oil sands expenditures increased to $70 million as a result of the ongoing expansion initiative.

Downstream capital investment of $276 million in 1998 was up $61 million from the preceding year. Refining and supply expenditures of $125 million in 1998 focused on environmental compliance, enhancing refinery reliability and efficiency, and debottlenecking of facilities. Marketing investments amounted to $133 million, up mainly as a result of the construction of new-image sites.

**Proceeds from Sale of Assets**

During 1998, Petro-Canada sold non-core oil and gas properties in Western Canada for $230 million, including $218 million in cash and exchanged properties valued at $12 million. The Company reinvested $43 million to acquire assets in core natural gas areas. Petro-Canada also realized gross proceeds of $177 million from the sale of ICG Propane Inc. and gross proceeds of $200 million from the sale of the Company's 50 per cent interest in the Petro-Canada Centre office complex in Calgary. Proceeds from the Petro-Canada Centre sale were used to retire approximately $140 million of associated debt and the remainder for general corporate purposes. The sale also eliminated an associated debt guarantee of approximately $140 million.

## FINANCING ACTIVITIES AND DIVIDENDS

**DEBT TO CASH FLOW AND DEBT TO DEBT PLUS EQUITY**

● **DEBT TO CASH FLOW** (times)

■ **DEBT TO DEBT PLUS EQUITY** (per cent)

**Sources of Capital Employed**

| (millions of dollars) | 1998 | 1997 | 1996 |
|---|---|---|---|
| Long-term debt, including current portion | **1 829** | 1 491 | 1 459 |
| Notes payable - Hibernia | **—** | 250 | 250 |
| Shareholders' equity | **3 936** | 3 922 | 3 692 |
| | **5 765** | 5 663 | 5 401 |
| Foreign currency translation adjustment on long-term debt[1] | **(212)** | (145) | (107) |
| **TOTAL** | **5 553** | 5 518 | 5 294 |

1 The translation adjustment on long-term debt is amortized over the remaining term of the debt. The weighted average term of the debt was 20 years at December 31, 1998.

Petro-Canada has established maximum leverage targets to ensure continued balance sheet strength and financial flexibility. These targets include a debt to cash flow ratio of 2.0 and a debt to debt plus equity ratio of 30 per cent, which are considered by management to be prudent.

The increase in total debt to $1 829 million, compared with $1 741 million reflected repayments of $390 million, new financing of $387 million and an increase of $91 million resulting from the effect of the lower Canadian dollar exchange rate relative to the U.S. dollar at year-end 1998. The Company's debt to debt plus equity ratio at December 31, 1998 was 31.7 per cent, versus 30.7 per cent at the end of 1997. The ratio of debt to cash flow was 2.2 at the end of 1998, up from 1.4 at year-end 1997, reflecting a substantial reduction in cash flow in 1998. Petro-Canada's EBITDAX interest coverage ratio, which measures the extent to which interest charges on the Company's debt instruments are covered by earnings before interest, income taxes, depreciation, depletion and amortization and exploration expenses, declined to 6.3 from 9.2 in 1997.

The fiscal regime for the Hibernia offshore oil field gives Petro-Canada access to a Government of Canada-guaranteed debt facility in the amount of $250 million. Although the debt under this facility matured in December 1998 and was

repaid, entitlement to the government guarantee remains available to Petro-Canada. Any debt supported by the government guarantee would be carried on Petro-Canada's balance sheet and it is anticipated that revenue from Petro-Canada's share of Hibernia production would service and repay this debt.

In November 1998, Petro-Canada issued U.S.$250 million, 30-year debentures, the proceeds of which were used for the repayment of the Hibernia notes and for general corporate purposes.

Dividends paid on common shares and variable voting shares were $87 million in 1998, up from $79 million in 1997. Petro-Canada reviews its dividend strategy from time to time to ensure alignment of dividend policy with shareholder requirements, and the Company's financial and growth objectives.

Petro-Canada will continue to meet working capital and bridge financing requirements using the Company's cash position and by issuing short-term debt if necessary. For operating purposes, Petro-Canada has access to bank lines of credit and a commercial paper program totalling $875 million, supported by committed and demand credit facilities from several major Canadian financial institutions. As at December 31, 1998, the commercial paper program was not utilized as the Company's net cash and short-term investments were $431 million. In early 1999, the Company entered into a syndicated bank line of credit in the amount of $1 125 million for general corporate and acquisition purposes.

Moody's Investors Service's credit rating on Petro-Canada's senior unsecured debt is A3 and Standard & Poor's is BBB+. Dominion Bond Rating Service and the Canadian Bond Rating Service ratings on Petro-Canada's unsecured notes and debentures are both A.

**INTEREST COVERAGE (EBITDAX)**
■ **INTEREST COVERAGE RATIO** (times)

### FINANCIAL RATIOS

| | 1998 | 1997 | 1996 |
|---|---|---|---|
| Current ratio | **1.4** | 1.3 | 1.1 |
| Interest coverage | | | |
| - earnings basis | **2.2** | 5.3 | 4.3 |
| - EBITDAX basis | **6.3** | 9.2 | 7.8 |
| - cash flow basis | **6.7** | 9.4 | 8.0 |
| Debt to cash flow | **2.2** | 1.4 | 2.0 |
| Debt to debt plus equity (per cent) | **31.7** | 30.7 | 31.6 |

## MANAGEMENT'S OUTLOOK

### BUSINESS ENVIRONMENT AND IMPLICATIONS

Prices for energy commodities are influenced by a number of factors including developments in supply and demand, weather, political events and the level of industry inventories. Crude oil prices are expected to remain weak in 1999. For planning purposes, management has assumed that the price of WTI crude will average U.S.$12.00 per barrel in 1999 compared with an average of U.S.$14.40 posted in 1998. The price of WTI averaged U.S.$12.25 in the first two months of 1999. Ongoing economic weakness, particularly in Asia and Latin America, continues to act as a major drag on the growth of global oil demand. These developments have been aggravated by warmer-than-normal weather conditions, by increased Iraqi production and by OPEC's inability to enforce the production cuts proposed in 1998. Although current low oil prices are putting downward pressure on non-OPEC supplies, the combination of negative factors is likely to be sufficient to keep prices weak throughout the first half of 1999.

The impact of low international oil prices on Canadian crude prices could be mitigated somewhat if the exchange rate relative to the U.S. currency remains under the 70 U.S. cents level. For planning purposes management has assumed an average Canadian dollar exchange rate of 65.00 U.S. cents for 1999, compared with an average of 67.50 U.S. cents in 1998. During the first two months of 1999, the Canadian dollar averaged 66.31 U.S. cents, reflecting weak commodity prices, partially offset by modestly higher Canadian interest rates relative to rates in the United States. It is unlikely that the positive spread between Canadian and U.S. interest rates will widen much from current levels and the outlook for commodity prices is weak. These factors suggest that the Canadian dollar will remain under pressure in spite of positive Canadian economic fundamentals relative to other OECD countries.

For business planning purposes management has assumed that the price of natural gas at the Alberta plant gate will average $2.05 per thousand cubic feet in 1999, compared with $2.02 in 1998. Increased Western Canadian natural gas export capacity led to a substantial narrowing in the spread between Canadian natural gas prices and U.S. gas prices in

1998. These differentials are expected to remain narrow in 1999 and support Canadian prices. The positive impact of increased export capacity from Western Canada will continue to be felt on prices throughout 1999, but will be tempered by warmer-than-normal winter conditions and high storage levels.

Expectations of weaker Canadian economic conditions lead management to anticipate industry growth in domestic sales of refined products in 1999 of 1.8 per cent compared with approximately 2.0 per cent in 1998.

In light of expected continued weakness in crude oil prices, Petro-Canada is working to improve its results in order to ensure its continued strong financial position. Measures under consideration include changes to the business portfolio, further capital and operating cost reductions and steps to improve the competitive position of the operating businesses.

### Accounting Changes

The Canadian Institute of Chartered Accountants ("CICA") has issued new standards on accounting for employees' future benefits, including pensions, and on accounting for income taxes. These standards will be effective on January 1, 2000. The changes will reduce shareholders' equity and may introduce more volatility into annual results, although income statement effects are not expected to be material.

## BUSINESS PORTFOLIO DEVELOPMENT

As part of its ongoing drive to increase shareholder value, the Company may expand, reduce or change its portfolio of businesses in the future. Recent consolidation among major integrated oil and gas companies may present both threats and opportunities for Petro-Canada in the Upstream and in the Downstream. The Company is monitoring these developments closely and considering the alternatives available to it.

### Upstream

Petro-Canada's Upstream portfolio consists of Western Canadian conventional oil and natural gas, oil sands, the natural gas liquids straddle plant business, Grand Banks oil and international oil and gas.

### Western Canada

The Company is rebalancing its business portfolio with an increased emphasis on profitably growing natural gas reserves and maintaining production, while divesting mature oil properties in order to maximize their value to the Company. As a result, Petro-Canada will continue divesting certain Western Canada oil producing assets as part of its staged exit from conventional crude production in that region. The Company also expects to buy natural gas producing assets according to their potential to generate value. The timing of these acquisitions and dispositions will depend on market conditions.

### Oil Sands

Petro-Canada's share of production from the Syncrude Joint Venture will increase from the current level of approximately 25 000 barrels per day to 30 000 barrels per day in the year 2000 with the completion of the second phase of a planned four-stage expansion. Petro-Canada's share of the Syncrude Joint Venture's production will rise to more than 50 000 barrels per day within the next decade. Phase Two of the expansion was approved by the owners in 1998. Subsequent phases of the expansion will be subject to owner approval following completion of engineering work. Increased production, lower unit operating costs, a favourable fiscal regime and slightly higher oil prices are expected to combine to provide attractive economic returns.

Petro-Canada holds one of the largest portfolios of *in situ* oil sands leases in the Athabasca area of northern Alberta. The Company recently filed a commercial application to develop its MacKay River assets, which are capable of supporting 22 000 barrels per day of oil production.

### Grand Banks

On the Grand Banks offshore Newfoundland, Petro-Canada envisages a continuing series of oil field developments coming on stream and ongoing exploration that have the potential to provide substantial growth in oil reserves and production for the foreseeable future. Production from Hibernia is expected to reach plateau levels of 135 000 barrels per day (Petro-Canada's share is 27 000 barrels per day) in mid-1999 as new wells are drilled and pressure maintenance facilities installed. Petro-Canada's second oil development, Terra Nova, received final regulatory and owner approval in early 1998. The owners expect first production from the field in late 2000. The Company's 29 per cent interest is expected to yield an average of 33 000 barrels per day at peak production soon after start-up.

As successive fields come on stream, Petro-Canada expects pre-production and operating costs to decrease as each new development makes use of existing infrastructure, transportation and transshipment facilities, thereby achieving lower unit development and production costs. Now that the Company has returned to full-cycle exploration on the Grand Banks, it is exposed to the risk of incurring expenses for unsuccessful wells in the region.

**International**

In Algeria, Petro-Canada and SONATRACH, the Algerian national oil company, are currently evaluating the results of three natural gas and gas condensate discoveries to determine their commercial potential. Petro-Canada relinquished 500 000 acres of its two-million-acre Algerian land holdings in February 1999. The Company plans to drill two wells in Algeria in 1999. SONATRACH and Petro-Canada recently extended their production-sharing contract whereby Petro-Canada will drill two other exploratory wells on the Tinrhert block prior to 2002.

Petro-Canada has secured exclusive rights to explore in neighbouring Tunisia on the 1.8-million-acre Tataouine block, which may be an extension of the prolific, oil-producing Berkine Basin in Algeria. After investment of an expected $10 million over two years, and if results warrant, the Company will determine whether to proceed with exploration drilling in the year 2000.

Offshore Norway, Petro-Canada's share of production from two fields, Njord and Veslefrikk, was 7 400 barrels per day in 1998 and will peak at more than 9 000 barrels in 2000. The Company's share of proved and probable reserves in the fields, at year-end 1998, was 26 million barrels.

**Natural Gas Liquids Business**

The Company expects that straddle plant margins will continue to be squeezed in 1999 by low liquids prices and high natural gas prices.

**Downstream**

Petro-Canada's Downstream operations consist of refineries in Edmonton, Oakville and Montreal, a lubricants facility in Mississauga, and a nationwide network of retail and wholesale fuel outlets. In the Downstream, the Company's objective is to achieve consistently better than cost of capital returns.

In refining, Petro-Canada will continue to operate its refineries at full capacity and optimize the crude slate in response to changing market conditions to maximize returns. The Company upgraded its facilities in 1998, including a $25 million expansion of the catalytic cracker in Montreal to increase the unit's capacity from 3 020 cubic metres (19 000 barrels) per day to 4 770 cubic metres (30 000 barrels) per day and to improve the refinery's ability to produce high quality gasolines. Petro-Canada has implemented initiatives to improve the long-term competitive position of the Lubricants business through reduced base stock production costs.

In marketing, the Company will continue to open new-image sites, offering improved convenience retailing and new product initiatives to consumers. These new image sites are expected to further improve key Downstream operating measures including petroleum products sales growth, site throughputs and unit operating expenses, as well as provide a significant uplift in non-petroleum revenues. The agreement under which Witco will distribute Petro-Canada's white oil products aims to improve the Company's lubricants sales mix.

## 1999 CAPITAL BUDGET

Petro-Canada manages its capital spending in view of its expectations of commodity prices and with the aim of maintaining financial flexibility and safeguarding its balance sheet. In 1999, Petro-Canada expects to invest approximately $1 075 million in property, plant and equipment and exploration. Petro-Canada will invest about $400 million in the continued development and exploration of its assets offshore Newfoundland, of which $315 million will be invested to develop the Terra Nova oil field and to drill wells to increase oil production and maintain field pressure at Hibernia. The remainder will be allocated to delineation and exploration drilling, and to acquire and process seismic data on other Grand Banks fields. Exploration and development expenditures in Western Canada will be approximately $260 million, almost entirely put toward the Company's natural gas portfolio. Of this amount, approximately $100 million will be allocated to exploration and $160 million to the development of conventional oil and gas properties. The Company will also invest approximately $95 million in Syncrude and other oil sands developments and approximately $70 million in Algeria, Norway and Tunisia.

The Downstream has made significant investments over the last several years. In 1999, the Company will reduce investment to approximately $220 million, primarily for continued improvement in the efficiency and reliability of the Company's refineries and lubricants facility, and to continue construction of new-image retail sites.

## ENVIRONMENTAL FACTORS

Petro-Canada is committed to responsible management of the environment and conducts a variety of programs to support its policy. The oil and gas industry is subject to increasing public scrutiny and regulation relating to protection of the environment. The environmental challenges facing the industry include: responding to new and broader legislation on issues such as waste management; flaring and other emissions; limits on access to exploration and development areas; product standards; the control and reduction of greenhouse gas emissions; fuel reformulation; and the reclamation and restoration of contaminated sites. Two specific environmental matters currently affecting the petroleum industry are the Kyoto protocol on greenhouse gas emissions and the regulation of sulphur and benzene levels in gasoline.

In December 1997, 160 nations adopted a global treaty in Kyoto, Japan, which, if implemented, will impose differentiated targets on nations, with Canada required to reduce emissions by six per cent below 1990 levels by 2010. The decrease in demand for hydrocarbons implied by these targets could damage both the upstream and downstream industries within Canada as well as the Canadian economy in general. In 1998, greenhouse gas emissions in Canada were approximately 14 per cent higher than in 1990. Petro-Canada accepts the need to reduce global greenhouse gas emissions and will continue to work with the Government of Canada and other stakeholders to develop a balanced action plan that effectively addresses climate change and the Kyoto protocol, while safeguarding Canada's economic interests. Petro-Canada will also identify and pursue business opportunities that may be available. For example, the Company is financially supporting research that aims to commercialize the production of fuel ethanol from biomass, using a process which results in low net greenhouse gas emissions.

Voluntary actions by Petro-Canada since 1990 have eliminated more than one million tonnes per year of greenhouse gas emissions. The Company reduced its overall greenhouse gas emissions by 2.8 per cent from 1996 to 1997, despite growth in oil and gas production of 1.1 per cent and an increase in refinery throughput of 0.6 per cent.

Petro-Canada will invest approximately $65 million by the end of 1999 to reduce the benzene content of gasoline that it produces at its major Downstream facilities to meet the 0.95 per cent maximum benzene content regulation set by the Government of Canada. During a scheduled maintenance shutdown at the Edmonton refinery in 1997, the Company installed a fractionation tower that reduced the benzene content of gasoline produced at its largest refinery by 40 per cent by the end of 1998.

Through investments at the Edmonton and Montreal refineries, Petro-Canada has lowered the sulphur content of its on-road diesel fuels, and is working with the Government of Canada and the Canadian Petroleum Products Institute to establish appropriate standards for sulphur content in gasoline. In the fall of 1998, the Government of Canada proposed regulations that would reduce the sulphur content of gasoline to 150 parts per million by 2002 and to 30 parts per million by 2005. Petro-Canada supports reasonable initiatives to reduce sulphur emissions from all sources, and is participating in the public comment process regarding the draft regulations. The Company is exploring the technology solutions which could address the target of 30 parts per million by 2005. Such solutions could require significant capital investment.

In 1998, outlays relating to environmental matters were approximately $57 million of capital expenditures and $83 million of expenses, compared with $56 million of capital expenditures and $83 million of expenses in 1997. At December 31, 1998, the Company had recorded a provision of $203 million for estimated costs associated with future removal and site restoration in the Upstream and Downstream. Management anticipates that capital and other expenditures necessary to meet environmental challenges will increase over time.

## RISK MANAGEMENT

Petro-Canada's risk management program is designed to reduce the variability of cash flow related to changes in commodity prices, currency exchange rates, interest rates and physical risks within defined tolerance levels. The Company's risk management objective is to ensure that it can continue to make the necessary investments to support its business strategies. Management oversees the overall direction, conduct and control of the Company's risk management activities, in accordance with the mandate, policies and guidelines established by the Board of Directors. Hedging, purchasing of insurance and other techniques are used in managing this exposure to within acceptable limits.

The Company's risk management policy prohibits the use of derivative instruments for speculative purposes. The term of hedging instruments cannot exceed 18 months, unless specifically authorized by the Board of Directors. The Board has authorized a 36 month term for the purpose of natural gas portfolio management.

Derivatives are usually transacted only with counterparties who possess a minimum long-term credit rating of A, and who have signed an International Swap Dealers Association agreement with the Company. Credit limits take into account current and potential losses due to non-performance of a counterparty and reduce credit risk concentration with any single counterparty. Ongoing monitoring and reporting of the derivatives portfolio includes periodic stress testing of the fair value of all outstanding derivatives.

The net effect of commodity, currency and interest rate hedging during 1998 was to reduce earnings by approximately $21 million after tax, compared with a positive effect of $9 million after tax in the prior year.

Consistent with its risk management objectives, Petro-Canada selectively manages its commodity, interest and exchange rate exposures through the use of physical product arrangements, futures, forward contracts, forward sales, swaps and options, as appropriate. Upstream crude oil exposure may be mitigated through the forward selling of, or purchase of options on, crude oil production. The Downstream sector hedges a portion of its exposure to price fluctuations in crude oil and refined product purchases and sales, and to changing refining margins, primarily through the use of futures contracts of short duration. The Company manages its natural gas portfolio on an aggregated portfolio basis which, from time to time, involves forward sales of natural gas production to hedge price exposure, as well as the use of basis swaps to diversify the Company's physical price risk. Petro-Canada's exposure to fluctuations in the Canadian dollar exchange rate is quantified on an aggregate basis and may be managed using foreign currency options, swaps and forward sales contracts.

As at December 31, 1998, through a combination of derivative and physical transactions, Petro-Canada had sold forward approximately 200 million cubic feet per day of 1999 natural gas production at an average price of approximately Cdn.$2.40 per thousand cubic feet, plant gate equivalent. Basis swaps were in place to diversify the portfolio's physical price risk and manage transportation exposure. At year-end 1998, the Downstream business had bought forward crude oil contracts to reduce exposure to margin fluctuations on fixed-price product sales and had short-term hedge positions to reduce exposure to price fluctuations on foreign and domestic crude oil and refined product purchases. Other positions at year-end 1998 included U.S.$25 million, or approximately 7 per cent of the 1999 exchange rate exposure, which was hedged using an option collar. The hedge results in protection above U.S.$0.7143 per Canadian dollar, with participation down to U.S.$0.6908 per Canadian dollar.

The Company manages its exposures to physical risk through comprehensive risk assessment and loss management processes, and maintains adequate insurance coverage. Risk assessment and loss prevention activities are prioritized to optimize the total benefit of this program.

Insurance coverage is placed with financially secure issuers in the global insurance market. Limits of insurance are based on engineering risk assessments. Deductibles are set at levels that appropriately enhance the Company's ability to retain risk where a benefit is indicated and within acceptable tolerance parameters. All major decisions are approved by senior management and are biased towards conservatism.

Overall, Petro-Canada maintains a conservative risk profile, which strives to manage downside risk and maintain balance sheet strength within its overriding objective of adding shareholder value.

## PREPAREDNESS FOR THE YEAR 2000

The Year 2000 issue is the result of computer systems and other equipment with embedded chips or processors using two digits rather than four to define a year. Some programs may recognize a date using "00" as the year 1900 rather than 2000. There are many other programming issues related to the specific use of date fields that could potentially cause difficulties. For example, programmers have used the date field to invoke special logic within applications, such as testing modes and errors. These misinterpretations could result in miscalculations or the failure of major systems, which could have a material impact on the Company and its businesses through business interruption, shutdown, financial loss, damage to reputation or third-party legal liability.

Petro-Canada appointed a Year 2000 project team in 1997 to address information technology, process control and supply chain concerns. Information technology encompasses the computer hardware, systems and software used throughout the Company's businesses. Process control includes embedded technology such as microprocessors contained in the automated equipment and associated software used in the Company's operations and facilities. Supply chain involves the Company's suppliers, customers and other third parties with whom the Company does business. The project team is guided by a steering committee consisting of senior employees from the Company's business and shared services units. The project team operates under the direction of the Company's Chief Information Officer and reports frequently to the Company's senior management and to the Audit Committee of its Board of Directors.

Petro-Canada's approach to address the Year 2000 issue involves five overlapping phases: (i) awareness and commitment, (ii) inventory, (iii) risk assessment, (iv) testing and remediation, and (v) contingency planning.

The technological and business concerns surrounding the Year 2000 issue have been brought to the attention of employees, vendors and suppliers. Information on related logistics and business issues is available to employees through an internal intranet site. Petro-Canada also maintains an Internet site for public access at www.petro-canada.ca/y2k/.

In the second quarter of 1998, the Company completed its inventory of all potentially affected systems. The inventory contains information on approximately 5 000 desktop systems, 400 servers, 500 applications, 6 500 pieces of process control equipment, and approximately 9 000 suppliers and 1 300 key customers. The Company has met with suppliers and service providers, and plans to expedite contingency planning for those that fall into a high-risk category. A database of the Company's suppliers contains feedback and compliance information, facilitating supplier evaluation.

The Company has followed a comprehensive risk management process to analyze systems identified as containing date-sensitive components. This process involves developing loss scenarios, understanding potential consequences of failure, estimating probability of failure, ranking risk and developing mitigation plans. As a result of these activities, the Company has identified approximately 230 process control systems and 350 information technology systems that it has categorized as "mission critical". In addition, a supplier classification process enabled the Company to identify approximately 500 critical supplier relationships.

Petro-Canada has developed a strict standard for Year 2000 conformity that includes 18 mandatory test dates and 43 optional test dates, depending on the functionality of the system being tested. All mission critical systems are tested for date sensitivity, and, if found to be date sensitive, for Year 2000 compliance. Systems that are found to be date sensitive and non-compliant become the focus of remediation.

Remediation is accomplished through repair, replacement with new equipment or programming, or retiring the non-compliant equipment or system.

As of December 31, 1998, approximately 94 per cent of mission critical applications and 67 per cent of mission critical process control systems had been remediated and tested. Remediation and testing of all mission critical systems is expected to be complete by June, 1999.

Petro-Canada is developing contingency plans to respond to situations which could arise as a result of external and internal failures related to the Year 2000 issue. The Company's business units are identifying scenarios that could result from external events such as extended power failure, the failure of critical third parties to successfully address their own material Year 2000 problems, or the failure of internal systems. The contingency plans are expected to include measures such as selecting alternative suppliers and modes of distribution, and will supplement disaster recovery and business continuity plans already in place. Development of contingency plans is anticipated to be complete by the end of the first quarter of 1999, with continued refinement of such plans throughout 1999 as additional information relating to the Company's exposures is identified. The effectiveness of the internal contingency plans will be tested in an exercise scheduled for early fall 1999.

The following table summarizes progress to December 31, 1998 and expectations with respect to work in progress:

- Implementation of SAP system (replacing non-compliant mainframe systems) ..... Complete
- Development of detailed project plans ..... Complete
- Inventory and assessment ..... Complete
- Remediation and testing ..... Over 80% complete
- Development of contingency plans ..... Completion expected by March 31, 1999
- Testing third-party interfaces ..... Throughout 1999
- Addressing non-mission-critical systems ..... Q2 1999-Q1 2000

Year 2000 activities planned for 1999 include:

- field testing of remaining mission critical systems at refineries and gas plants, coinciding where possible with scheduled maintenance shutdowns;
- mainframe and point-of-sale testing to verify operational links throughout the retail network;
- remediation and testing of non-mission critical applications;
- continued review of supply chain and integration of high-risk third parties into contingency plans;
- testing and fine-tuning of integrated contingency plans; and
- ensuring Year 2000 quality control for new purchases.

The Company has and will continue to expend considerable resources to address its Year 2000 issues. However, there can be no assurance that the Company will detect all Year 2000 problems within its hardware, software and process control systems. Further, there can be no assurance that the Company's assessment of the readiness of its suppliers, third-party service providers and vendors will be accurate. The Company believes its worst case scenarios include:

- corruption of data in its internal information technology and process control systems;
- failure of infrastructure systems provided by government agencies and other third parties, including communications, power and transport; and
- health, environmental and safety issues relating to the Company's facilities.

If any of these were to occur, the Company's operations could be interrupted, in some cases for a sustained period of time.

In managing its Year 2000 exposure, the Company has endeavoured to ensure that its insurance will not be materially affected if the cause of a loss, if incurred, is related to a Year 2000 incident. There are, however, exceptions for risks related to oil pollution from vessels, operation of aircraft and the supply of fuel for refueling aircraft, for which the Company's insurers have adopted a common industry-wide approach which may limit coverage. The Company believes that the coverage obtained is the broadest available at premiums which management considers to be reasonable.

With respect to Year 2000 insurance coverage for the Terra Nova project, insurers have the right to review the project's Year 2000 program and be satisfied with the level of preparedness.

In 1998, the Company spent approximately $12 million for Year 2000 initiatives and expects to spend a further $10 million in 1999. Approximately half of the two-year estimated total of $22 million is capital expenditures, with the remainder expensed.

## MANAGEMENT'S RESPONSIBILITY FOR THE FINANCIAL STATEMENTS

The preparation and presentation of the Company's consolidated financial statements is the responsibility of management. The financial statements have been prepared in accordance with generally accepted accounting principles and necessarily include estimates which are based on management's best judgments. Information contained elsewhere in the Annual Report is consistent, where applicable, with that contained in the financial statements.

Management is also responsible for installing and maintaining a system of internal controls to provide reasonable assurance that assets are safeguarded and that reliable financial information is produced for preparation of financial statements.

Arthur Andersen LLP, a firm of chartered accountants, were appointed by the shareholders as external auditors to conduct an independent examination and express their opinion on the consolidated financial statements. The Auditors' Report outlines the auditors' opinion and the scope of their examination. The Company has also contracted Arthur Andersen LLP to provide other audit services, including a review of the system of internal controls to ensure that there are no significant weaknesses.

The Board of Directors is responsible for overseeing management's performance of its responsibilities for financial reporting and internal control. The Board exercises these responsibilities with the assistance of the Audit Committee of the Board.

James M. Stanford
PRESIDENT AND
CHIEF EXECUTIVE OFFICER

Wesley R. Twiss
EXECUTIVE VICE-PRESIDENT AND
CHIEF FINANCIAL OFFICER

January 29, 1999

## AUDIT COMMITTEE OF THE BOARD OF DIRECTORS

The Board of Directors exercises its responsibility for overseeing management's performance of its financial reporting and internal control responsibilities with the assistance of the Audit Committee of the Board.

The Committee, which is composed of not less than three (currently five) directors who are not employees of the Company, reviews the annual consolidated financial statements prior to their approval by the Board. The Committee also reviews financial information contained in prospectuses and in reports filed with regulatory authorities, as required, as well as quarterly financial information.

With respect to the external auditors, the Committee reviews the terms of engagement, the annual audit plan, the Auditors' Report and the results of the audit. The Committee also recommends to the Board a firm of external auditors to be appointed by the shareholders.

With respect to Arthur Andersen LLP's engagement as contract auditor to review the system of internal controls, the Committee receives periodic reports, reviews significant findings and recommendations and approves their engagement contract and annual review plan.

Senior management, the external auditor and the contract auditor attend all Audit Committee meetings and each is provided with the opportunity to meet privately with the Committee.

Claude Fontaine
CHAIRMAN OF THE AUDIT COMMITTEE

January 29, 1999

## AUDITORS' REPORT

To the Shareholders of Petro-Canada:
We have audited the consolidated balance sheet of Petro-Canada as at December 31, 1998 and 1997 and the consolidated statements of earnings, retained earnings and cash flows for each of the three years in the period ended December 31, 1998. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with generally accepted auditing standards. Those standards require that we plan and perform an audit to obtain reasonable assurance whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation.

In our opinion, these consolidated financial statements present fairly, in all material respects, the financial position of the Company as at December 31, 1998 and 1997 and the results of its operations and its cash flows for each of the three years in the period ended December 31, 1998 in accordance with generally accepted accounting principles.

Arthur Andersen LLP
Chartered Accountants
Calgary, Alberta.

January 29, 1999

## CONSOLIDATED STATEMENT OF EARNINGS

(stated in millions of Canadian dollars)

| For the years ended December 31, | 1998 | 1997 | 1996 |
|---|---|---|---|
| **REVENUE** | | | |
| Operating | **$ 4 951** | $ 6 017 | $ 5 514 |
| Investment and other income | **65** | 79 | 93 |
| | **5 016** | 6 096 | 5 607 |
| **EXPENSES** | | | |
| Crude oil and product purchases | **2 413** | 3 183 | 2 988 |
| Producing, refining and marketing | **1 309** | 1 352 | 1 257 |
| General and administrative (Note 4) | **265** | 194 | 187 |
| Exploration | **95** | 75 | 60 |
| Depreciation, depletion and amortization | **530** | 482 | 440 |
| Taxes other than income taxes | **63** | 68 | 70 |
| Interest | **122** | 106 | 109 |
| | **4 797** | 5 460 | 5 111 |
| **EARNINGS BEFORE INCOME TAXES** | **219** | 636 | 496 |
| **PROVISION FOR INCOME TAXES** (Note 5) | | | |
| Current | **166** | (41) | 160 |
| Deferred | **(42)** | 371 | 89 |
| | **124** | 330 | 249 |
| **NET EARNINGS** | **$ 95** | $ 306 | $ 247 |
| **EARNINGS PER SHARE** (dollars) (Note 6) | **$ 0.35** | $ 1.13 | $ 0.94 |

## CONSOLIDATED STATEMENT OF RETAINED EARNINGS

(stated in millions of Canadian dollars)

| For the years ended December 31, | 1998 | 1997 | 1996 |
|---|---|---|---|
| **RETAINED EARNINGS (DEFICIT) AT BEGINNING OF YEAR** | **$ 139** | $ (88) | $ (282) |
| Net earnings | **95** | 306 | 247 |
| Dividends on common and variable voting shares | **(87)** | (79) | (53) |
| **RETAINED EARNINGS (DEFICIT) AT END OF YEAR** | **$ 147** | $ 139 | $ (88) |

## CONSOLIDATED STATEMENT OF CASH FLOWS

(stated in millions of Canadian dollars)

| For the years ended December 31 | 1998 | 1997 | 1996 |
|---|---|---|---|
| **OPERATING ACTIVITIES** | | | |
| Net earnings | **$ 95** | $ 306 | $ 247 |
| Items not affecting cash flow (Note 7) | **640** | 882 | 556 |
| Exploration expenses (Note 12) | **95** | 75 | 60 |
| Cash flow | **830** | 1 263 | 863 |
| Decrease (increase) in operating working capital and other (Note 8) | **238** | (167) | 59 |
| Cash flow from operating activities | **1 068** | 1 096 | 922 |
| **INVESTING ACTIVITIES** | | | |
| Expenditures on property, plant and equipment and exploration | **(1 116)** | (1 049) | (959) |
| Proceeds from sales of assets (Note 9) | **505** | 201 | 92 |
| Increase in deferred charges and other assets, net | **(17)** | (15) | (9) |
| Acquisition of Amerada Hess Canada Ltd. (Note 10) | **—** | — | (735) |
| | **(628)** | (863) | (1 611) |
| **FINANCING ACTIVITIES AND DIVIDENDS** | | | |
| Proceeds from issue of long-term debt | **387** | — | 377 |
| Reduction of notes payable - Hibernia | **(250)** | — | (50) |
| Reduction of long-term debt | **(140)** | (114) | (2) |
| Dividends on common and variable voting shares | **(87)** | (79) | (53) |
| Proceeds from issue of common and variable voting shares | **6** | 3 | 406 |
| | **(84)** | (190) | 678 |
| **INCREASE (DECREASE) IN CASH AND SHORT-TERM INVESTMENTS** | **356** | 43 | (11) |
| **CASH AND SHORT-TERM INVESTMENTS AT BEGINNING OF YEAR** | **75** | 32 | 43 |
| **CASH AND SHORT-TERM INVESTMENTS AT END OF YEAR** | **$ 431** | $ 75 | $ 32 |

## CONSOLIDATED BALANCE SHEET

(stated in millions of Canadian dollars)

| As at December 31 | 1998 | 1997 |
|---|---|---|
| **ASSETS** | | |
| **CURRENT ASSETS** | | |
| Cash and short-term investments | $ 431 | $ 75 |
| Accounts receivable | 683 | 904 |
| Inventories (Note 11) | 455 | 510 |
| Prepaid expenses | 15 | 20 |
| Income taxes recoverable | — | 68 |
| | 1 584 | 1 577 |
| **PROPERTY, PLANT AND EQUIPMENT, NET** (Note 12) | 6 433 | 6 441 |
| **DEFERRED CHARGES AND OTHER ASSETS** (Note 13) | 381 | 320 |
| | $ 8 398 | $ 8 338 |
| **LIABILITIES AND SHAREHOLDERS' EQUITY** | | |
| **CURRENT LIABILITIES** | | |
| Accounts payable and accrued liabilities | $ 1 063 | $ 1 189 |
| Income taxes payable | 95 | — |
| Current portion of long-term debt | 3 | 3 |
| | 1 161 | 1 192 |
| **NOTES PAYABLE - HIBERNIA** (Note 14) | — | 250 |
| **LONG-TERM DEBT** (Note 14) | 1 826 | 1 488 |
| **DEFERRED CREDITS AND OTHER LIABILITIES** (Note 15) | 362 | 321 |
| **DEFERRED INCOME TAXES** | 1 113 | 1 165 |
| **COMMITMENTS AND CONTINGENT LIABILITIES** (Note 21) | | |
| **SHAREHOLDERS' EQUITY** (Note 16) | 3 936 | 3 922 |
| | $ 8 398 | $ 8 338 |

Approved on behalf of the Board

James M. Stanford
DIRECTOR

Claude Fontaine
DIRECTOR

## NOTE 1 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

(a) Basis of Presentation

The consolidated financial statements include the accounts of Petro-Canada and of all subsidiary companies ("the Company") and comply in all material respects with Canadian generally accepted accounting principles.

The preparation of financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingencies at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period.

(b) Cash and Short-Term Investments

Cash and short-term investments comprise cash in the bank, less outstanding cheques, and deposits with a maturity of less than one year.

(c) Inventories

Inventories are stated at the lower of cost and net realizable value. Cost of crude oil and products is determined primarily on a "last-in, first-out" basis.

(d) Investments

Investments in companies over which the Company has significant influence, other than joint ventures, are accounted for on the equity method. Interests in joint ventures are proportionately consolidated while other long-term investments are accounted for on the cost method.

(e) Property, Plant and Equipment

Investments in exploration and development activities are accounted for on the successful efforts method. Under this method the acquisition cost of unproved acreage is capitalized. Costs of exploratory wells are initially capitalized pending determination of proved reserves and costs of wells which are assigned proved reserves remain capitalized while costs of unsuccessful wells are charged to earnings. All other exploration costs are charged to earnings as incurred. Development costs, including the cost of all wells, are capitalized.

Substantially all of the Company's exploration and development activities are conducted jointly with others. Only the Company's proportionate interest in such activities is reflected in the financial statements.

The interest cost of debt attributable to the construction of major new facilities is capitalized during the construction period.

(f) Depreciation, Depletion and Amortization

Depreciation and depletion of capitalized costs of oil and gas producing properties are calculated using the unit of production method.

Depreciation of other plant and equipment is provided on either the unit of production method or the straight line method, based on the estimated service lives of the related assets, as appropriate.

The carrying amounts of unproved properties are evaluated periodically for impairment with any such impairment being charged to earnings.

(g) Future Removal and Site Restoration Costs

Estimated future removal and site restoration costs which are probable and can be reasonably determined are provided for on either the unit of production method or the straight line method, based on the estimated service lives of the related assets, as appropriate.

(h) Translation of Foreign Currency

Monetary assets and liabilities are translated into Canadian dollars at rates of exchange in effect at the balance sheet date. Other assets and related depreciation, depletion and amortization, other liabilities, revenue and other expense items are translated at rates of exchange in effect at the respective transaction dates. The resulting exchange gains or losses are included in earnings, except for unrealized exchange gains or losses arising on translation of long-term debt, which are deferred and amortized over the remaining term of the debt.

Foreign operations are integrated with the Company's other activities and are translated in the manner described above.

(i) Hedging Activity

The Company uses derivative instruments to reduce its exposure to foreign exchange, interest rate and commodity price fluctuations. Gains and losses on these contracts, all of which constitute effective hedges, are deferred and recognized as a component of the related transaction.

(j) Post Retirement Benefits

In addition to its pension plans the Company provides other post retirement benefits, including health, dental and life insurance, to its qualifying retirees. The actuarially determined cost of these benefits is accrued over the estimated service lives of employees.

## NOTE 2 SEGMENTED INFORMATION

The Company operates in two business segments:

Upstream, comprising: exploration, development, production, transportation and marketing activities for crude oil, natural gas, propane, field liquids, sulphur and oil sands; and extraction of liquids from natural gas.

Downstream, comprising: purchase and sale of crude oil; refining crude oil into oil products; and distribution and marketing of these and other purchased products.

| | Upstream | | | Downstream | | |
|---|---|---|---|---|---|---|
| | 1998 | 1997 | 1996 | 1998 | 1997 | 1996 |
| **REVENUE** | | | | | | |
| Sales to customers and other revenues | **$ 944** | $ 1 131 | $ 1 035 | **$ 4 057** | $ 4 971 | $ 4 551 |
| Inter-segment sales | **492** | 698 | 667 | **11** | 9 | 8 |
| **SEGMENT REVENUE** | **$ 1 436** | $ 1 829 | $ 1 702 | **$ 4 068** | $ 4 980 | $ 4 559 |
| **EARNINGS** | | | | | | |
| Operating earnings before the following: | **$ 618** | $ 854 | $ 789 | **$ 444** | $ 505 | $ 340 |
| Depreciation, depletion and amortization | **385** | 347 | 315 | **137** | 128 | 120 |
| Exploration expense | **95** | 75 | 60 | **—** | — | — |
| Interest | **—** | — | — | **—** | — | — |
| Provision for income taxes - current | **151** | (67) | 126 | **73** | 113 | 111 |
| - deferred | **(72)** | 313 | 92 | **65** | 45 | (18) |
| Reorganization costs (after income taxes) (Note 4) | **—** | — | — | **—** | — | — |
| **NET EARNINGS** | **$ 59** | $ 186 | $ 196 | **$ 169** | $ 219 | $ 127 |
| **CAPITAL AND EXPLORATION EXPENDITURES** | | | | | | |
| Property, plant and equipment and exploration expenditures | **$ 818** | $ 805 | $ 649 | **$ 276** | $ 215 | $ 282 |
| Deferred charges and other assets | **15** | 9 | (2) | **(7)** | 10 | 2 |
| Acquisition of Amerada Hess Canada Ltd. | **—** | — | 735 | **—** | — | — |
| | **$ 833** | $ 814 | $ 1 382 | **$ 269** | $ 225 | $ 284 |
| **TOTAL ASSETS** | **$ 4 635** | $ 4 765 | $ 4 447 | **$ 3 070** | $ 3 085 | $ 2 987 |
| **CAPITAL EMPLOYED** | **$ 3 306** | $ 3 270 | $ 3 298 | **$ 1 958** | $ 2 003 | $ 1 936 |

Financial information by business segment is presented in the following table as though each segment were a separate business entity. Inter-segment transfers of products, which are accounted for at market value, are eliminated on consolidation. Shared Services includes investment income, interest expense and general corporate revenue and expense. Shared Services assets are principally cash and short-term investments and other general corporate assets.

| Shared Services | | | Consolidated | | |
|---|---|---|---|---|---|
| **1998** | 1997 | 1996 | **1998** | 1997 | 1996 |
| **$ 15** | $ (6) | $ 21 | **$ 5 016** | $ 6 096 | $ 5 607 |
| — | — | — | | | |
| **$ 15** | $ (6) | $ 21 | | | |
| **$ (32)** | $ (60) | $ (24) | **$ 1 030** | $ 1 299 | $ 1 105 |
| **8** | 7 | 5 | **530** | 482 | 440 |
| — | — | — | **95** | 75 | 60 |
| **122** | 106 | 109 | **122** | 106 | 109 |
| **(40)** | (87) | (77) | **184** | (41) | 160 |
| **(31)** | 13 | 15 | **(38)** | 371 | 89 |
| — | — | — | **42** | — | — |
| **$ (91)** | $ (99) | $ (76) | **$ 95** | $ 306 | $ 247 |
| **$ 22** | $ 29 | $ 28 | **$ 1 116** | $ 1 049 | $ 959 |
| **9** | (4) | 9 | **17** | 15 | 9 |
| — | — | — | — | — | 735 |
| **$ 31** | $ 25 | $ 37 | **$ 1 133** | $ 1 064 | $ 1 703 |
| **$ 693** | $ 488 | $ 335 | **$ 8 398** | $ 8 338 | $ 7 769 |
| **$ 289** | $ 245 | $ 60 | **$ 5 553** | $ 5 518 | $ 5 294 |

## NOTE 3 TAXES AND CROWN ROYALTIES

In addition to the provision for income taxes and other taxes included in the consolidated statement of earnings, the following items have been collected or produced on behalf of governments and have been paid or are payable by the Company:

| | 1998 | 1997 | 1996 |
|---|---|---|---|
| Provincial fuel and sales taxes | **$ 1 418** | $ 1 356 | $ 1 268 |
| Federal excise taxes | **819** | 820 | 786 |
| Goods and Services Tax collected | **602** | 680 | 585 |
| Crown royalties, paid and paid in kind | **125** | 217 | 225 |
| | **$ 2 964** | $ 3 073 | $ 2 864 |

## NOTE 4 GENERAL AND ADMINISTRATIVE EXPENSES

General and administrative expenses for the year ended December 31, 1998 include a provision of $64 million before income tax for the reorganization of the Company's downstream administration. The provision decreases 1998 net earnings by $42 million and cash flow by $38 million.

## NOTE 5 INCOME TAXES

The computation of the provision for income taxes, which requires adjustment to earnings before income taxes for non-taxable and non-deductible items, is as follows:

| | 1998 | 1997 | 1996 |
|---|---|---|---|
| Earnings before income taxes | **$ 219** | $ 636 | $ 496 |
| Add (deduct): | | | |
| Non-deductible royalties and other payments to provincial governments, net | **130** | 198 | 180 |
| Resource allowance | **(123)** | (188) | (162) |
| Non-deductible depreciation, depletion and amortization and disposals | **125** | 145 | 118 |
| Equity in earnings of affiliates | **(10)** | (7) | (8) |
| Other | **(13)** | 7 | — |
| Earnings as adjusted before income taxes | **$ 328** | $ 791 | $ 624 |
| Canadian Federal income tax rate | **38.0%** | 38.0% | 38.0% |
| Canadian Federal income tax on earnings as adjusted | **$ 125** | $ 301 | $ 237 |
| Large Corporations Tax | **14** | 14 | 12 |
| Provincial and other income taxes, net of federal abatement | **14** | 34 | 37 |
| Rebates and other | **(29)** | (19) | (37) |
| Provision for income taxes | **$ 124** | $ 330 | $ 249 |
| Effective income tax rate on earnings before income taxes | **56.6%** | 51.9% | 50.2% |

Complex income tax issues which involve interpretations of continually changing regulations are encountered in computing the provision for income taxes. Management believes that adequate provision has been made for all such outstanding issues.

## NOTE 6 EARNINGS PER SHARE

The basic earnings per share, based on the weighted average number of common and variable voting shares outstanding in 1998 of 271.2 million (1997 - 270.9 million; 1996 - 262.3 million), for the year ended December 31, 1998 was $0.35 (1997 - $1.13; 1996 - $0.94). Fully diluted earnings per share, calculated on the assumption that all outstanding stock options were exercised, do not differ from the basic earnings per share.

## NOTE 7 ITEMS NOT AFFECTING CASH FLOW

| | 1998 | 1997 | 1996 |
|---|---|---|---|
| Depreciation, depletion and amortization | **$ 530** | $ 482 | $ 440 |
| Deferred income taxes | **(42)** | 371 | 89 |
| Provision for future removal and site restoration costs | **28** | 30 | 23 |
| Amortization of unrealized foreign exchange losses | **24** | 16 | 14 |
| Loss (gain) on sale of assets | **3** | (32) | (21) |
| Reclassification of current income taxes to proceeds from sales of assets (Note 9) | **87** | — | — |
| Other | **10** | 15 | 11 |
| | **$ 640** | $ 882 | $ 556 |

## NOTE 8 DECREASE (INCREASE) IN OPERATING WORKING CAPITAL AND OTHER

| | 1998 | 1997 | 1996 |
|---|---|---|---|
| Accounts receivable | **$ 221** | $ 39 | $ (46) |
| Income taxes recoverable | **68** | (68) | 86 |
| Inventories | **55** | (38) | (58) |
| Prepaid expenses | **5** | 8 | (3) |
| Accounts payable and accrued liabilities | **(126)** | (7) | 17 |
| Income taxes payable | **95** | (58) | 49 |
| Sale of ICG Propane Inc. | **(24)** | — | — |
| Current portion of long-term liabilities and other | **(56)** | (43) | 14 |
| | **$ 238** | $ (167) | $ 59 |

Operating working capital is comprised of working capital other than cash and short-term investments and current portion of long-term debt.

## NOTE 9 PROCEEDS FROM SALES OF ASSETS

Proceeds from sales of assets, for the year ended December 31, 1998, are from the sale of the Company's investment in Petro-Canada Centre, the sale of the Company's wholly-owned subsidiary, ICG Propane Inc. (Note 21 (b)), and the sale of non-core oil and gas properties and other assets. These transactions resulted in after-tax gains (losses) on disposal of $12 million, $nil and $(5) million, respectively. Current income taxes of $87 million relating to these sales have been deducted from proceeds from sales of assets. Proceeds in 1997 and 1996 relate to the sale of non-core oil and gas properties and other assets.

## NOTE 10 ACQUISITION OF AMERADA HESS CANADA LTD.

Effective April 3, 1996 the Company acquired all of the issued shares of Amerada Hess Canada Ltd. The acquisition has been accounted for by the purchase method of accounting as follows:

| | |
|---|---|
| Book value of assets acquired, excluding cash | $ 563 |
| Book value of assumed liabilities | (229) |
| | 334 |
| Excess of attributed value over book value of acquired assets allocated to property, plant and equipment | 401 |
| | $ 735 |

Funds for the acquisition were provided by the issuance of common and variable voting shares and long-term debt.

## NOTE 11 INVENTORIES

| | 1998 | 1997 |
|---|---|---|
| Crude oil, refined products and merchandise | $ 382 | $ 438 |
| Materials and supplies | 73 | 72 |
| | $ 455 | $ 510 |

## NOTE 12 PROPERTY, PLANT AND EQUIPMENT

| | 1998 | | | 1997 | | | Capital Expenditures | |
|---|---|---|---|---|---|---|---|---|
| | Cost | Accumulated Depreciation, Depletion and Amortization | Net | Cost | Accumulated Depreciation, Depletion and Amortization | Net | 1998 | 1997 |
| **UPSTREAM** | | | | | | | | |
| Oil and gas | | | | | | | | |
| Canada non-frontier | **$ 3 908** | **$ 1 869** | **$ 2 039** | $ 4 185 | $ 2 054 | $ 2 131 | **$ 337** | $ 393 |
| Hibernia | **1 025** | **44** | **981** | 965 | 2 | 963 | **60** | 143 |
| Other frontier | **267** | **—** | **267** | 99 | — | 99 | **174** | 46 |
| Asset under capital lease | **92** | **3** | **89** | 92 | — | 92 | **—** | — |
| Foreign | **349** | **60** | **289** | 294 | 33 | 261 | **55** | 60 |
| Oil sands | | | | | | | | |
| Syncrude | **691** | **253** | **438** | 633 | 238 | 395 | **58** | 42 |
| Other | **233** | **228** | **5** | 224 | 224 | — | **12** | 8 |
| Natural gas liquids | **292** | **194** | **98** | 580 | 341 | 239 | **20** | 37 |
| Other | **48** | **36** | **12** | 41 | 32 | 9 | **7** | 1 |
| | **6 905** | **2 687** | **4 218** | 7 113 | 2 924 | 4 189 | **723** | 730 |
| **DOWNSTREAM** | | | | | | | | |
| Refining | **2 697** | **1 524** | **1 173** | 2 563 | 1 472 | 1 091 | **138** | 85 |
| Marketing and other | **1 566** | **593** | **973** | 1 465 | 553 | 912 | **138** | 130 |
| | **4 263** | **2 117** | **2 146** | 4 028 | 2 025 | 2 003 | **276** | 215 |
| **OTHER PROPERTY, PLANT AND EQUIPMENT** | **407** | **338** | **69** | 590 | 341 | 249 | **22** | 29 |
| | **$ 11 575** | **$ 5 142** | **$ 6 433** | $ 11 731 | $ 5 290 | $ 6 441 | **$ 1 021** | $ 974 |

Interest capitalized during 1998 amounted to $32 million (1997 - $35 million; 1996 - $32 million).

Capital expenditures and exploration expenses charged to earnings are classified as investing activities in the consolidated statement of cash flows.

The Company is an owner of the Hibernia offshore oil field where production began in November 1997. The drilling of development wells continues and a portion of the costs of the production platform and ancillary facilities is being depreciated based on development of the field to date.

The Company is party to an agreement for the time charter and operation of a vessel for the transportation of crude oil produced from Hibernia. This time charter is for an initial term of ten years ending in 2007, and is extendible at the Company's option for an additional 15 years. The time charter has been accounted for as a capital lease (Note 14).

## NOTE 13 DEFERRED CHARGES AND OTHER ASSETS

| | 1998 | 1997 |
|---|---|---|
| Translation adjustment on long-term debt | $ 212 | $ 145 |
| Deferred pension funding | 58 | 70 |
| Investments | 51 | 38 |
| Deferred financing costs | 20 | 9 |
| Goodwill | 8 | 27 |
| Other | 32 | 31 |
| | $ 381 | $ 320 |

## NOTE 14 LONG-TERM DEBT

| | Maturity | 1998 | 1997 |
|---|---|---|---|
| Debentures and notes | | | |
| 8.60% unsecured notes (U.S. $300 million) | 2001 | $ 459 | $ 428 |
| 9.25% unsecured debentures (U.S. $300 million) | 2021 | 459 | 428 |
| 7.875% unsecured debentures (U.S. $275 million) | 2026 | 421 | 393 |
| 7.00% unsecured debentures (U.S. $250 million) | 2028 | 383 | — |
| Other | | 12 | 11 |
| Mortgage bonds[1] | | — | 77 |
| Notes payable[1] | | — | 62 |
| Capital lease (Note 12)[2] | 2022 | 95 | 92 |
| | | 1 829 | 1 491 |
| Current portion | | 3 | 3 |
| | | $ 1 826 | $ 1 488 |

1 This debt was retired as a result of the sale of the Company's investment in Petro-Canada Centre (Note 9).

2 The implicit rate of interest in the capital lease is 11.90%. The aggregate repayment will be $95 million (U.S. $62 million), including $3 million (U.S. $2 million) to $6 million (U.S. $4 million) in each of the next five years.

The minimum repayment of long-term debt, other than the capital lease, in the next five years will be a payment of $459 million (U.S. $300 million) in 2001.

Interest on long-term debt was $120 million in 1998 (1997 - $103 million; 1996 - $101 million).

Notes payable - Hibernia comprised $150 million 6.125% bonds and $100 million 7.74% bonds. Both series of bonds matured in 1998 and were refinanced through the issue of long-term debt.

## NOTE 15 DEFERRED CREDITS AND OTHER LIABILITIES

| | 1998 | 1997 |
|---|---|---|
| Future removal and site restoration costs | $ 181 | $ 145 |
| Post retirement benefits | 115 | 111 |
| Long-term liabilities | 66 | 65 |
| | $ 362 | $ 321 |

## NOTE 16 SHAREHOLDERS' EQUITY

| | 1998 | 1997 |
|---|---|---|
| Common and variable voting shares | $ 1 217 | $ 1 211 |
| Contributed surplus | 2 572 | 2 572 |
| Retained earnings | 147 | 139 |
| | $ 3 936 | $ 3 922 |

The authorized share capital of the Company is comprised of an unlimited number of:
(a) Preferred shares issuable in series designated as Senior Preferred Shares
(b) Preferred shares issuable in series designated as Junior Preferred Shares
(c) Common and variable voting shares

The common share capital is comprised of two classes of common equity: common shares which may be held only by residents of Canada and variable voting shares which may be held only by non-residents of Canada. The common shares and the variable voting shares differ only in their voting entitlements. The common shares carry one vote per share. The variable voting shares carry between one vote per share to 1/3 of one vote per share, depending on the number of variable voting shares outstanding compared to the number of voting shares outstanding. If the number of variable voting shares exceeds 25% of the public float of voting shares, the vote per variable voting share decreases so that the variable voting shares as a class do not carry more than 25% of the aggregate outstanding votes attached to all voting shares in the public float.

Changes in common and variable voting shares were as follows:

| | Shares | Amount | Shares | Amount |
|---|---|---|---|---|
| | 1998 | | 1997 | |
| Balance at beginning of year | 271 007 532 | $ 1 211 | 270 728 387 | $ 1 208 |
| Issued for cash under employee stock option and share purchase plans | 332 170 | 6 | 279 145 | 3 |
| Balance at end of year | 271 339 702 | $ 1 217 | 271 007 532 | $ 1 211 |

The Company has granted options to purchase shares under the terms of stock option plans. Stock options outstanding as at December 31, 1998 were as follows:

| Expiry Date | Option Price | Number of Shares |
|---|---|---|
| July 3, 2001 | $ 13.00 | 569 826 |
| July 29, 2002 | 8.125 | 261 800 |
| December 31, 2002 | 15.75 | 442 300 |
| March 18, 2003 | 7.875 | 219 200 |
| March 2, 2004 | 13.625 | 161 960 |
| March 1, 2005 | 11.50 | 189 760 |
| January 31, 2006 | 16.25 – 17.70 | 733 080 |
| January 30, 2007 | 20.05 – 24.90 | 1 252 775 |
| February 5, 2008 | 19.50 – 25.50 | 1 528 750 |

## NOTE 17 PENSION PLANS

The Company maintains pension plans with defined benefit and defined contribution provisions. The defined benefit provisions are generally based upon years of service and average salary during the final years of employment. Certain defined benefit options require employee contributions and the balance of the funding for the registered plans is provided by the Company, based upon the advice of an independent actuary. Under the defined contribution provision, the Company's annual contribution is 5% of each participating employee's pensionable earnings. Substantially all of the pension assets are held in equity, fixed income and other marketable securities.

| | 1998 | 1997 | 1996 |
|---|---|---|---|
| **PENSION EXPENSE** | | | |
| Current service cost | **$ 25** | $ 23 | $ 23 |
| Interest cost | **72** | 67 | 66 |
| Actual return on plan assets | **(123)** | (117) | (109) |
| Net amortization and deferral | **34** | 38 | 39 |
| | **$ 8** | $ 11 | $ 19 |
| **PENSION FUNDING** | **$ 6** | $ 9 | $ 23 |
| **FINANCIAL STATUS OF DEFINED BENEFIT PENSION PLANS** | | | |
| Actuarial value of assets | **$ 963** | $ 879 | |
| Pension obligation | **837** | 801 | |
| Net pension asset | **$ 126** | $ 78 | |

The net pension asset is amortized to earnings over the expected average remaining service life of the employees covered by the plans, which is currently 10 years.

As at December 31, 1998 $824 million (1997 - $789 million) of the pension obligation was vested.

| **DEFINED BENEFIT PLAN ASSUMPTIONS** | | | |
|---|---|---|---|
| Discount rate | **9.0%** | 9.0% | 9.0% |
| Long-term rate of return on plan assets | **9.0%** | 9.0% | 9.0% |
| Rate of compensation increase, excluding merit increases | **3.0%**[1] | 3.0% | 5.0% |

1 Increasing to 5.5% in 1999 and thereafter.

## NOTE 18 RELATED PARTY TRANSACTIONS

Transactions with the Government of Canada (which holds 18% of the Company's issued shares at December 31, 1998), its agencies and other related parties, are in the normal course of business and are therefore on the same terms as those accorded to non-related parties.

As at December 31, 1998 officers and employees owed the Company $2 million (1997 - $2 million) in relation to stock purchase plans.

## NOTE 19 FAIR VALUE OF FINANCIAL INSTRUMENTS

As at December 31, 1998 the fair value and the related method of determination along with the carrying value of the Company's financial instruments were as follows:

Cash and Short-Term Investments
The fair value of cash and short-term investments approximates the carrying amount of these instruments due to their short maturity.

Long-Term Debt
The fair value of long-term debt is based on publicly quoted market values.

Derivative Instruments
The fair value of derivative instruments is based on quotes provided by brokers. The fair value of these financial instruments represents an approximation of amounts that would be received or paid to counterparties to settle these instruments prior to maturity. The Company plans to hold all derivative instruments, outstanding as at December 31, 1998, to maturity.

| | Carrying Amount | Fair Value |
|---|---|---|
| Cash and short-term investments | $ 431 | $ 431 |
| Long-term debt[1] | (1 829) | (2 025) |
| Derivative instruments | — | (12) |

1 Excludes translation adjustment of $212 million (Note 13).

## NOTE 20 DERIVATIVE INSTRUMENTS

The Company is exposed to market risks resulting from fluctuations in foreign exchange, interest rates and commodity prices in the course of its normal business operations. The Company actively monitors its exposure to market fluctuations and employs the use of derivative instruments to manage these risks, as it considers appropriate. These derivative instruments are entered into solely for hedging purposes.

Crude Oil and Products
The downstream business segment uses forward contracts to reduce exposure to margin fluctuations, including margins on fixed price product sales, and short-term price fluctuations on the purchase of foreign and domestic crude oil and refined products.

Natural Gas
The Company has entered into fixed price and basis swap contracts to balance term, location and price exposure in order to reduce the overall effect of natural gas price volatility.

Currency
The Company has reduced its exposure to exchange rate movements between the Canadian and United States dollars by entering into option collars.

**NOTE 20** **DERIVATIVE INSTRUMENTS** (continued)

The Company's outstanding contracts for derivative instruments and related unrealized gains (losses) were as follows:

| | Quantity or Notional Principal | Average Price[1] | Unrealized Gains (Losses) | Maturity |
|---|---|---|---|---|
| **December 31, 1998** | | | | |
| **CRUDE OIL AND PRODUCTS** (millions of barrels) | | | | |
| Crude oil | 8.5 | $ 20.46 | $ (9) | 1999/2000 |
| Products | 1.8 | 19.29 | — | 1999 |
| | | | (9) | |
| **NATURAL GAS** (billions of cubic feet) | | | | |
| Natural gas - bought | 2.3 | 2.68[2] | — | 1999 |
| Natural gas - sold | 20.6 | 2.36[2] | (1) | 1999 |
| Natural gas - swaps | 37.9 | n.a. | — | 1999/2000 |
| | | | (1) | |
| **CURRENCY** (U.S. dollars) | | | | |
| Collars | $ 25 | 1.4000-1.4475 | (2) | 1999 |
| | | | $ (12) | |
| **December 31, 1997** | | | | |
| **CRUDE OIL AND PRODUCTS** (millions of barrels) | | | | |
| Crude oil | 8.8 | $ 27.20 | $ — | 1998 |
| Products | 0.8 | 26.44 | 1 | 1998 |
| | | | 1 | |
| **NATURAL GAS** (billions of cubic feet) | | | | |
| Natural gas - bought | 3.8 | 1.62[2] | (1) | 1998 |
| Natural gas - sold | 2.1 | 1.35[2] | — | 1998 |
| Natural gas - swaps | 9.7 | n.a. | (2) | 1999 |
| | | | (3) | |
| **CURRENCY** (U.S. dollars) | | | | |
| Forwards | $ 113 | 1.3945 | $ (3) | 1998 |
| Collars | 275 | 1.3839-1.4408[3] | (2) | 1998/1999 |
| | | | (5) | |
| | | | $ (7) | |

1 Canadian dollars per barrel, per thousand cubic feet or per U.S. dollar, as applicable.

2 Represents the volume weighted average prices at plant gate.

3 Represents the weighted average Canadian call and put strike prices, respectively.

Derivative instruments involve a degree of credit risk which the Company controls through the establishment of credit policies and limits and the selection of financially sound counterparties. Market risk relating to changes in value or settlement cost of the Company's derivative instruments is essentially offset by gains or losses on the hedged positions.

## NOTE 21 COMMITMENTS AND CONTINGENT LIABILITIES

(a) The Company is a participant in the project to develop the Terra Nova offshore oil field. Costs to production start-up are estimated at $1.95 billion; the Company's 29% share is expected to be approximately $566 million (before investment tax credits), of which $204 million had been expended to December 31, 1998. The Company's share of development costs subsequent to start-up is estimated at $181 million, which is expected to be financed by cash flow from the project.

(b) In December 1998, the Company completed the sale of all of the issued and outstanding shares of ICG Propane Inc. (Note 9) pursuant to an Agreement dated July 20, 1998, as amended. The Competition Bureau has applied to the Competition Tribunal for various forms of relief, including an order dissolving the sale, but a decision is not expected before the fall of 1999.

(c) The Company has leased property and equipment under various long-term operating leases for periods up to 2013. The minimum annual rentals for non-cancellable operating leases are estimated at $88 million in 1999, $68 million in 2000, $59 million in 2001, $50 million in 2002, $43 million in 2003 and $39 million per year thereafter until 2013.

(d) The Company is involved in litigation and claims associated with normal operations. Management is of the opinion that any resulting settlements would not materially affect the financial position of the Company.

## NOTE 22 UNCERTAINTY DUE TO THE YEAR 2000 ISSUE

The Year 2000 Issue arises because many computerized systems use two digits rather than four to identify a year. Date-sensitive systems may recognize the Year 2000 as 1900 or some other date. Similar problems may arise in some systems which use certain dates in 1999 to represent something other than a date. The effects of the Year 2000 Issue may be experienced before, on, or after January 1, 2000, and if not addressed, the impact on operating and financial reporting may vary from minor to significant errors which could affect the Company's ability to conduct normal business operations. There can be no assurance that the Company's equipment or systems or those of its suppliers and customers will be Year 2000 compliant on a timely basis or that Year 2000 problems, including the identification and remediation of all relevant issues, will not have a material adverse effect on the Company.

## NOTE 23 COMPARATIVE FIGURES

Reclassifications are made to the prior years' comparative figures to conform with the current year's presentation.

## NOTE 24 GENERALLY ACCEPTED ACCOUNTING PRINCIPLES ("GAAP") IN THE UNITED STATES

The Company's consolidated financial statements have been prepared in accordance with generally accepted accounting principles ("GAAP") in Canada, which differ in some respects from those applicable in the United States. The following are the significant differences in accounting principles as they pertain to the accompanying consolidated financial statements:

(a) The Company follows the deferral method of accounting for income taxes. Under United States GAAP the use of the liability method would be required.

(b) The Company has deferred unrealized gains and losses on translation of long-term debt payable in foreign currencies for amortization over the remaining term of the debt. Under United States GAAP gains or losses on the translation of long-term debt payable in foreign currencies would be credited or charged to earnings with no deferral.

(c) United States GAAP requires that interest be capitalized as part of the cost of certain assets while they are being prepared for their intended use. The Company does not capitalize interest on all such assets.

(d) In prior years the Company transferred amounts from contributed surplus to the accumulated deficit. Under United States GAAP these transfers would not have occurred.

(e) The Company uses the proportionate consolidation method of accounting for its investments in joint ventures. Under United States GAAP certain of these investments would be accounted for on the equity method. This difference in accounting does not affect net earnings.

(f) United States GAAP utilizes the concept of comprehensive income which includes items not included in net earnings. The Company's net earnings under United States GAAP is the same as its comprehensive income.

The application of United States GAAP would have the following effects on earnings as reported:

| | 1998 | 1997 | 1996 |
|---|---|---|---|
| Net earnings as reported in the consolidated statement of earnings | $ 95 | $ 306 | $ 247 |
| Adjustments, net of applicable income taxes | | | |
| Accounting for income taxes | (2) | (10) | (33) |
| Foreign currency translation | (46) | (26) | 7 |
| Capitalization of interest and related amortization | 21 | 16 | 17 |
| Other | 1 | (1) | (3) |
| Net earnings, as adjusted | $ 69 | $ 285 | $ 235 |
| Earnings per share, as adjusted | $ 0.25 | $ 1.05 | $ 0.90 |

The application of United States GAAP would have the following effects on the consolidated balance sheets as reported:

| | As Reported | Increase (Decrease) | United States GAAP |
|---|---|---|---|
| **DECEMBER 31, 1998** | | | |
| Current assets | $ 1 584 | $ (22) | $ 1 562 |
| Property, plant and equipment, net | 6 433 | 534 | 6 967 |
| Deferred charges and other assets | 381 | (199) | 182 |
| Current liabilities | 1 161 | (16) | 1 145 |
| Long-term debt | 1 826 | (17) | 1 809 |
| Deferred income taxes | 1 113 | 389 | 1 502 |
| Contributed surplus | 2 572 | 1 122 | 3 694 |
| Retained earnings (deficit) | 147 | (1 165) | (1 018) |
| **DECEMBER 31, 1997** | | | |
| Current assets | $ 1 577 | $ (19) | $ 1 558 |
| Property, plant and equipment, net | 6 441 | 449 | 6 890 |
| Deferred charges and other assets | 320 | (97) | 223 |
| Current liabilities | 1 192 | (11) | 1 181 |
| Long-term debt | 1 488 | (156) | 1 332 |
| Deferred income taxes | 1 165 | 517 | 1 682 |
| Contributed surplus | 2 572 | 1 122 | 3 694 |
| Retained earnings (deficit) | 139 | (1 139) | (1 000) |

**Net Proved Reserves of Crude Oil and Natural Gas Before Royalties**

Proved reserves of crude oil and liquids increased by 44 million barrels in 1998 to 476 million barrels. The major positive change was the booking of 84 million barrels at Syncrude, composed of a 127 million barrel proved undeveloped extension related to the Syncrude expansion less a 43 million barrel reclassification of proved developed reserves to probable. Other positive changes included discoveries, extensions and revisions of 15 million barrels in Western Canada conventional and a 12 million barrel extension at Hibernia. Partially offsetting the positive changes were sales of 32 million barrels of Western Canada properties and production of 36 million barrels.

Proved reserves of natural gas decreased by 16 billion cubic feet to 2 503 billion cubic feet. Major positive changes included the addition of 341 billion cubic feet from discoveries, extensions and revisions and purchases of 31 billion cubic feet from several Western Canada transactions. Offsetting these positive changes were sales of 123 billion cubic feet of Western Canada properties and production of 265 billion cubic feet.

Based on the reserve estimates of participants, 123 million barrels of initial proved plus probable reserves before royalties are attributed to Petro-Canada's 20 per cent interest in Hibernia. Additional proved reserves at Hibernia, Veslefrikk and Njord will be booked when appropriate during the production phases of these projects. No proved reserves have yet been booked for Terra Nova or other Grand Banks discoveries, or for Algerian discoveries at Hassi Imoulaye, Timellouline South, Tahala North and Tamadanet South. A two million barrel writedown of Algerian Tamadanet proved reserves was taken in 1998.

| | Crude Oil And Field Natural Gas Liquids (Millions Of Barrels) | | | | | |
|---|---|---|---|---|---|---|
| Net Proved Developed and Undeveloped Reserves Before Royalties[1,2] | Western Provinces | Conventional International[3,4] | Conventional Grand Banks[5] | Synthetic Crude Oil[6] | Total | Natural Gas (Billions Of Cubic Feet) |
| **BEGINNING OF YEAR 1996** | 143 | 15 | — | 265 | 423 | 2 065 |
| Revisions of previous estimates | 3 | (2) | — | — | 1 | 13 |
| Sale of reserves in place | (12) | — | — | — | (12) | (42) |
| Purchase of reserves in place | 54 | 14 | — | — | 68 | 592 |
| Discoveries, extensions and improved recovery | 8 | — | — | — | 8 | 217 |
| Production | (23) | (4) | — | (9) | (36) | (260) |
| **END OF YEAR 1996** | 173 | 23 | — | 256 | 452 | 2 585 |
| Revisions of previous estimates | 2 | (2) | — | 7 | 7 | 51 |
| Sale of reserves in place | (11) | — | — | — | (11) | (183) |
| Purchase of reserves in place | 1 | — | — | — | 1 | 63 |
| Discoveries, extensions and improved recovery | 8 | 1 | 8 | — | 17 | 280 |
| Production | (21) | (4) | — | (9) | (34) | (277) |
| **END OF YEAR 1997** | 152 | 18 | 8 | 254 | 432 | 2 519 |
| Revisions of previous estimates | 9 | (2) | — | (43) | (36) | 57 |
| Sale of reserves in place | (32) | — | — | — | (32) | (123) |
| Purchase of reserves in place | 1 | — | — | — | 1 | 31 |
| Discoveries, extensions and improved recovery | 6 | 2 | 12 | 127 | 147 | 284 |
| Production | (18) | (5) | (4) | (9) | (36) | (265) |
| **END OF YEAR 1998** | **118** | **13** | **16** | **329** | **476** | **2 503** |

1 Net proved developed and undeveloped reserves before royalties are Petro-Canada's working interest in reserves before the deduction of Crown or other royalties. Such royalties are subject to change by legislation or regulation and can also vary depending on production rates, selling prices and timing of initial production. No reserve quantities have been included to reflect royalty interests Petro-Canada has in various properties.

2 Proved reserves are the estimated quantities of crude oil, natural gas and natural gas liquids which geological and engineering data demonstrate with reasonable certainty to be recoverable in future years from known reservoirs under existing economic and operating conditions. Proved developed reserves are those proved reserves that are expected to be recovered from existing wells or facilities. Proved undeveloped reserves are proved reserves which are not recoverable from existing wells or facilities, but which are expected to be recovered through additional development drilling or through the upgrading of existing or additional new facilities.

3 International proved reserves comprise four million barrels of oil in Algeria and nine million barrels of oil and eight billion cubic feet of natural gas in Norway.

4 After deduction of a 20 per cent royalty, Petro-Canada receives crude oil to recover costs incurred on behalf of Petro-Canada and Sonatrach, the Algerian state oil company. The remaining production is shared between Petro-Canada and Sonatrach, varying with the level of production. The total share accruing to Petro-Canada cannot exceed 49 per cent of the gross production volumes.

5 Proved reserves at Hibernia are based on primary recovery for drilled fault blocks and incremental recovery in fault blocks showing response to water or gas injection.

6 Proved reserves of synthetic crude oil are based on high geological certainty, with drilling hole spacing less than 700 metres and application of existing or piloted technology. Appropriate co-owner and regulatory approvals are in place.

**Net Probable Reserves of Crude Oil and Natural Gas Before Royalties**

Probable reserves of crude oil and liquids increased by 139 million barrels in 1998 to 432 million barrels. The major positive change was the booking of a 133 million barrel extension related to the Syncrude expansion. Other positive changes included international discoveries and extensions of 27 million barrels, primarily in Algeria, and positive revisions in Western Canada of seven million barrels. Partially offsetting the positive changes were reclassifications of 19 million barrels of Grand Banks oil — 12 million barrels at Hibernia were reclassified as proved and seven million barrels at Terra Nova were reclassified as possible — and sales of eight million barrels of Western Canada properties.

Probable reserves of natural gas increased by 527 billion cubic feet to 1 144 billion cubic feet. The major positive changes were the addition of 448 billion cubic feet from domestic and international discoveries and extensions — 222 billion cubic feet in Western Canada, 204 billion cubic feet in Algeria and 22 billion cubic feet in Norway — and purchases of 100 billion cubic feet in the Wildcat Hills and Hanlan areas in Western Canada. Partially offsetting these positive changes were sales of 13 billion cubic feet of minor Western Canada properties and negative revisions of eight billion cubic feet.

| | Crude Oil And Field Natural Gas Liquids (Millions Of Barrels) | | | | | |
|---|---|---|---|---|---|---|
| Net Probable Reserves Before Royalties[1,2] | Western Provinces | Conventional International[3,4] | Conventional Grand Banks | Synthetic Crude Oil[5] | Total | Natural Gas (Billions Of Cubic Feet) |
| **END OF YEAR 1997** | 40 | 24 | 229 | — | 293 | 617 |
| Revisions of previous estimates | 7 | (1) | (19) | — | (13) | (8) |
| Sale of reserves in place | (8) | — | — | — | (8) | (13) |
| Purchase of reserves in place | — | — | — | — | — | 100 |
| Discoveries, extensions and improved recovery | — | 27 | — | 133 | 160 | 448 |
| **END OF YEAR 1998** | **39** | **50** | **210** | **133** | **432** | **1 144** |

1 Net probable reserves before royalties are Petro-Canada's working interest in reserves before the deduction of Crown or other royalties. Such royalties are subject to change by legislation or regulation and can also vary depending on production rates, selling prices and the timing of initial production. No reserve quantities have been included to reflect royalty interests Petro-Canada has in various properties.

2 Unproved reserves are based on geologic and/or engineering data similar to that used in estimates of proved reserves, but technical, contractual, economic or regulatory uncertainties preclude such reserves being classified as proved. Unproved reserves may be further classified as probable reserves and possible reserves. Probable reserves are less certain than proved reserves and can be estimated with a degree of certainty sufficient to indicate they are more likely to be recovered than not.

3 International probable reserves comprise 33 million barrels of liquids and 204 billion cubic feet of gas in Algeria and 17 million barrels of liquids and 29 billion cubic feet of gas in Norway.

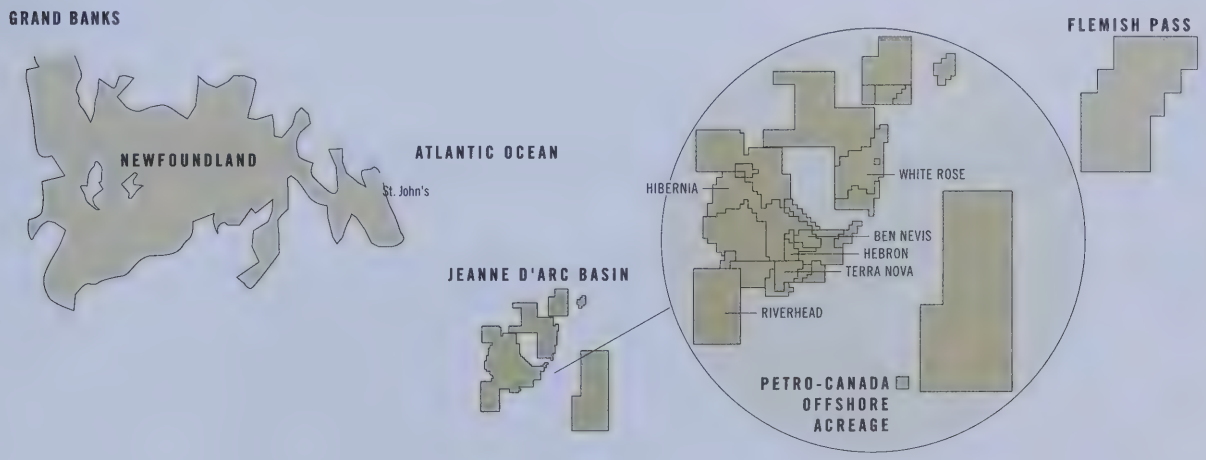
4 After deduction of a 20 per cent royalty, Petro-Canada receives crude oil to recover costs incurred on behalf of Petro-Canada and Sonatrach, the Algerian state oil company. The remaining production is shared between Petro-Canada and Sonatrach, varying with the level of production. The total share accruing to Petro-Canada cannot exceed 49 per cent of the gross production volumes.

5 Probable reserves of synthetic crude oil are based on high geological certainty, with drilling hole spacing less than 700 metres and application of existing or piloted technology. Appropriate co-owner approvals are in place and regulatory approvals are being sought.

## Principal Reserve and Production Locations

| Fields | Proved Reserves Before Royalties[1] At December 31, 1998 (millions of barrels) | Average 1998 Per Cent of Total Proved Oil Reserves | Daily Production Before Royalties[1] (thousands of barrels) | Per Cent of Total 1998 Daily Production |
|---|---|---|---|---|
| **CRUDE OIL** | | | | |
| Syncrude, Alberta | 329.0 | 75 | 25.2 | 28 |
| Pembina, Alberta | 17.7 | 4 | 2.5 | 3 |
| Valhalla, Alberta | 17.1 | 4 | 8.7 | 10 |
| Hibernia, offshore Newfoundland | 15.6 | 4 | 13.0 | 15 |
| Ferrier, Alberta | 14.9 | 3 | 3.2 | 4 |
| Boundary Lake, British Columbia | 8.8 | 2 | 1.8 | 2 |
| Veslefrikk, offshore Norway | 6.3 | 1 | 5.2 | 6 |
| Willesden Green, Alberta | 5.9 | 1 | 1.7 | 2 |
| Tamadanet, Algeria | 3.8 | 1 | 4.5 | 5 |
| Njord, offshore Norway | 2.9 | 1 | 2.2 | 2 |
| Other | 18.4 | 4 | 20.4 | 23 |
| **TOTAL** | 440.4 | 100 | 88.4 | 100 |

1 Does not include natural gas liquids. Several mature oil fields, including Bellshill Lake, Utikuma, Shekilie and Sturgeon Lake, were sold in 1998.



## SUPPLEMENTAL INFORMATION

| Principal Reserve and Production Locations<br>Fields | Proved Reserves Before Royalties[1] At December 31, 1998 (billions of cubic feet) | Per Cent of Total Proved Gas Reserves | Average 1998 Daily Production Before Royalties[1] (millions of cubic feet) | Per Cent of Total 1998 Daily Production |
|---|---|---|---|---|
| **NATURAL GAS** | | | | |
| Wildcat Hills, Alberta | 400 | 16 | 53 | 7 |
| Hanlan, Alberta | 298 | 12 | 92 | 13 |
| Jedney/Beg/Bubbles, British Columbia | 236 | 9 | 41 | 6 |
| Ricinus/Bearberry, Alberta | 163 | 7 | 88 | 12 |
| Fort St. John, British Columbia | 138 | 5 | 35 | 5 |
| Clarke Lake, British Columbia | 126 | 5 | 52 | 7 |
| Gilby, Alberta | 126 | 5 | 38 | 5 |
| Brazeau, Alberta | 98 | 4 | 41 | 6 |
| Medicine Hat, Alberta | 97 | 4 | 27 | 4 |
| Laprise Creek, British Columbia | 96 | 4 | 26 | 4 |
| Other | 717 | 29 | 229 | 31 |
| **TOTAL** | 2 495 | 100 | 722 | 100 |

1 Does not include natural gas liquids.

**WESTERN CANADA**

## Oil and Gas Landholdings (Gross/Net)[1]

| (millions of acres) | Developed Lands[2] Gross 1998 | Developed Lands[2] Net 1998 | Developed Lands[2] Gross 1997 | Developed Lands[2] Net 1997 | Undeveloped Lands[2] Gross 1998 | Undeveloped Lands[2] Net 1998 | Undeveloped Lands[2] Gross 1997 | Undeveloped Lands[2] Net 1997 | Total Gross 1998 | Total Net 1998 | Total Gross 1997 | Total Net 1997 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **CANADA** | | | | | | | | | | | | |
| Mainland Canada | **2.5** | **1.3** | 3.1 | 1.6 | **2.8** | **1.9** | 2.8 | 1.8 | **5.3** | **3.2** | 5.9 | 3.4 |
| Oil Sands | **—** | **—** | — | — | **0.8** | **0.2** | 0.7 | 0.2 | **0.8** | **0.2** | 0.7 | 0.2 |
| East Coast Offshore[3] | **0.1** | **—** | 0.1 | — | **2.5** | **0.6** | 1.4 | 0.3 | **2.6** | **0.6** | 1.5 | 0.3 |
| Other Frontier[4] | **—** | **—** | — | — | **7.2** | **6.0** | 7.2 | 6.1 | **7.2** | **6.0** | 7.2 | 6.1 |
| International[5] | **—** | **—** | — | — | **3.3** | **3.3** | 2.1 | 2.0 | **3.3** | **3.3** | 2.1 | 2.0 |
| **TOTAL** | **2.6** | **1.3** | 3.2 | 1.6 | **16.6** | **12.0** | 14.2 | 10.4 | **19.2** | **13.3** | 17.4 | 12.0 |

1 Gross acres includes the interests of others while net acres excludes the interest of others.

2 Developed lands are areas capable of production while undeveloped lands are areas with rights to explore.

3 East Coast offshore landholdings includes parcels acquired at the 1998 Newfoundland land sale for which licences were issued in the first quarter of 1999. These licences cover acreage of 0.8 million gross acres, 0.2 million net to Petro-Canada.

4 Exploration is not currently permitted in the Eastern Arctic or off the West Coast of Canada.

5 International landholdings are in Algeria (excludes undeveloped acreage relinquished to Algeria in the first quarter of 1999 covering 0.5 million acres gross, 0.5 million acres net to Petro-Canada), Norway and Tunisia.

## Refining by Locations

| (thousands of cubic metres) | Daily Rated Capacity as at December 31[1] 1998 | Average Volumes of Crude Oil Processed per Calendar Day 1998 | 1997 | 1996 | 1995 |
|---|---|---|---|---|---|
| Edmonton, Alberta | **19.1** | **17.2** | 19.0 | 18.5 | 17.5 |
| Montreal, Quebec | **16.7** | **15.8** | 14.3 | 13.9 | 13.0 |
| Oakville, Ontario | **13.2** | **13.6** | 13.4 | 12.6 | 11.5 |
| **TOTAL** | **49.0** | **46.6** | 46.7 | 45.0 | 42.0 |

1 Total rated refinery capacity was increased to 49.0 thousand cubic metres per day, from 45.4 thousand cubic metres per day, as a result of a reassessment in the fourth quarter of 1998.

## QUARTERLY FINANCIAL AND STOCK TRADING INFORMATION

| (unaudited, stated in millions of dollars unless otherwise indicated) | First Quarter | Second Quarter | Third Quarter | Fourth Quarter | First Quarter | Second Quarter | Third Quarter | Fourth Quarter |
|---|---|---|---|---|---|---|---|---|
| | 1998 | | | | 1997 | | | |
| **REVENUE** | | | | | | | | |
| Operating | $ 1 263 | $ 1 200 | $ 1 226 | $ 1 262 | $ 1 651 | $ 1 402 | $ 1 474 | $ 1 490 |
| Investment and other income | 10 | 58 | 11 | (14) | 3 | 42 | 18 | 16 |
| | 1 273 | 1 258 | 1 237 | 1 248 | 1 654 | 1 444 | 1 492 | 1 506 |
| **EXPENSES** | | | | | | | | |
| Crude oil and product purchases | 587 | 561 | 622 | 643 | 886 | 729 | 789 | 779 |
| Producing, refining and marketing | 339 | 329 | 313 | 328 | 322 | 337 | 336 | 357 |
| General and administrative[1] | 54 | 126 | 51 | 34 | 51 | 55 | 53 | 35 |
| Exploration | 32 | 9 | 27 | 27 | 19 | 19 | 12 | 25 |
| Depreciation, depletion and amortization | 130 | 136 | 129 | 135 | 126 | 120 | 113 | 123 |
| Taxes other than income taxes | 18 | 16 | 16 | 13 | 16 | 20 | 16 | 16 |
| Interest | 29 | 30 | 32 | 31 | 28 | 27 | 25 | 26 |
| | 1 189 | 1 207 | 1 190 | 1 211 | 1 448 | 1 307 | 1 344 | 1 361 |
| **EARNINGS BEFORE INCOME TAXES** | 84 | 51 | 47 | 37 | 206 | 137 | 148 | 145 |
| **PROVISION FOR INCOME TAXES** | 48 | 26 | 32 | 18 | 102 | 86 | 75 | 67 |
| **NET EARNINGS** | $ 36 | $ 25 | $ 15 | $ 19 | $ 104 | $ 51 | $ 73 | $ 78 |
| **CASH FLOW** | $ 260 | $ 173 | $ 174 | $ 223 | $ 389 | $ 288 | $ 278 | $ 308 |
| **SEGMENTED EARNINGS** | | | | | | | | |
| Earnings from operations | | | | | | | | |
| Upstream | $ 2 | $ 5 | $ (4) | $ 26 | $ 86 | $ 24 | $ 24 | $ 54 |
| Downstream | 63 | 55 | 52 | 34 | 50 | 54 | 73 | 48 |
| Shared Services | (28) | (27) | (27) | (21) | (27) | (27) | (21) | (24) |
| Reorganization costs | — | (42) | — | — | — | — | — | — |
| | 37 | (9) | 21 | 39 | 109 | 51 | 76 | 78 |
| (Losses) gains on asset sales | (1) | 34 | (6) | (20) | (5) | — | (3) | — |
| Net earnings | $ 36 | $ 25 | $ 15 | $ 19 | $ 104 | $ 51 | $ 73 | $ 78 |
| **SHARE INFORMATION** (dollars per share) | | | | | | | | |
| Earnings | 0.13 | 0.09 | 0.06 | 0.07 | 0.38 | 0.19 | 0.27 | 0.29 |
| Cash flow | 0.96 | 0.64 | 0.64 | 0.82 | 1.44 | 1.06 | 1.03 | 1.13 |
| Dividends paid | 0.08 | 0.08 | 0.08 | 0.08 | 0.05 | 0.05 | 0.08 | 0.08 |
| Share price[2] | | | | | | | | |
| —High | 26.95 | 26.65 | 24.70 | 21.40 | 21.90 | 25.40 | 26.95 | 29.85 |
| —Low | 21.75 | 22.20 | 14.55 | 15.80 | 19.25 | 18.90 | 22.25 | 23.90 |
| —Close (end of period) | 25.30 | 23.60 | 19.15 | 16.25 | 20.00 | 22.40 | 25.35 | 26.00 |
| Shares traded (millions)[3] | 65.1 | 62.7 | 57.4 | 59.5 | 112.1 | 46.1 | 44.5 | 68.4 |

1 In the second quarter of 1998, includes a $64 million before-tax provision for the reorganization of the Company's Downstream administration. The provision reduced 1998 net earnings by $42 million and cash flow by $38 million.

2 Share prices are for trading on The Toronto Stock Exchange.

3 Total traded on the Toronto, Montreal, New York, Vancouver and Alberta stock exchanges.

**PETRO-CANADA'S OUTSTANDING SHARES**

At December 31, 1998, Petro-Canada's public float was 221.9 million shares, comprised of 179.5 million common shares held by residents of Canada, and 42.4 million variable voting shares held by non-residents of Canada.

**TRANSFER AGENT AND REGISTRAR**

In Canada, Petro-Canada's transfer agent and registrar is CIBC Mellon Trust Company. Share certificates may be transferred at CIBC Mellon's corporate offices in Halifax, Montreal, Toronto, Winnipeg, Regina, Calgary and Vancouver. Questions relating to share certificates, dividends and estate settlements should be directed to CIBC Mellon's corporate offices in Calgary:

CIBC Mellon Trust Company
600 The Dome Tower
333 - 7th Avenue S.W.
Calgary, Alberta, Canada T2P 2Z1
Telephone toll free: (800) 387-0825
Fax: (416) 643-5501
Email: enquiries@rmtrust.ca
Website: www.cibcmellon.ca

In the United States, Petro-Canada's transfer agent and registrar is ChaseMellon Shareholder Services, L.L.C., which can be contacted at:

ChaseMellon Shareholder Services, L.L.C.
85 Challenger Road
Overpeck Center
Ridgefield Park, NJ 07660
Telephone toll free: (800) 387-0825
Fax: (416) 643-5501
Email: enquiries@cibcmellon.ca
Website: www.cibcmellon.ca

**ANNUAL MEETING**

The annual meeting of shareholders will be held at 11:00 a.m. local time on Tuesday, April 27, 1999, at:
Crystal Ballroom, Palliser Hotel
133-9th Avenue S.W.
Calgary, Alberta

**STOCK EXCHANGE LISTINGS AND SYMBOLS**

Toronto, Montreal, New York and Alberta
Canadian exchanges: PCA
New York: PCZ

**DIVIDENDS**

Petro-Canada's Board of Directors has adopted a policy of paying quarterly dividends of $0.08 ($0.32 per annum) per common share. The Board reviews the dividend policy periodically in light of the Company's financial position, its financing requirements for growth and other factors.

Dividends are normally paid on or about the first day of the months of January, April, July and October. The record dates are normally set approximately four weeks ahead of the dividend payment date. Dividends can be deposited directly to shareholders' bank accounts. If this service is desired, please contact the transfer agent and registrar.

**INVESTOR RELATIONS AND SHAREHOLDER COMMUNICATIONS**

Petro-Canada's Investor Relations staff may be contacted by writing to or calling:

Petro-Canada Investor Relations
P.O. Box 2844
Calgary, Alberta, Canada T2P 3E3
Telephone: (403) 296-4040
Fax: (403) 296-3061
Email: investor@petro-canada.ca
Visit our website at:
www.petro-canada.ca

**INFORMATION FOR INVESTORS OUTSIDE OF CANADA**

Dividends and interest payments made to residents in countries with which Canada has a bilateral tax treaty are generally subject to Canadian non-resident withholding tax of 15 per cent. The majority of countries are in this category. For U.S. residents, these rates were reduced in 1996 to five per cent on certain dividends and 10 per cent on interest. There is no Canadian tax on gains from the sale of shares or debt instruments owned by non-residents not carrying on business in Canada. Estate taxes or succession duties are not levied by any level of government in Canada. (This summary is not intended as tax advice; shareholders may wish to consult a tax advisor with respect to particular circumstances.)

**DUPLICATE REPORTS**

While we try to avoid duplicate mailings of annual reports and other shareholder materials, shareholders with more than one unregistered account may receive duplicates. Registered shareholders with more than one account may contact the transfer agent and registrar to eliminate duplicate mailings.

## BOARD OF DIRECTORS

**ANGUS A. BRUNEAU**[1], a resident of St. John's, has been a director of Petro-Canada since 1996. Dr. Bruneau is chairman of Fortis Inc. He is chairman of Air Nova, a director of the Energy Council of Canada, Inco Limited, the SNC-Lavalin Group Inc., Canada Life Assurance Company, the Council for Canadian Unity, the Natural Sciences and Engineering Research Council and a member of the Canada Foundation for Innovation.

**GAIL COOK-BENNETT**[1], a resident of Toronto, has been a director of Petro-Canada since 1991. Dr. Cook-Bennett is chairperson of the Canada Pension Plan Investment Board. She is a director of Consumers' Gas Co. Ltd., Manufacturers Life Insurance Company, Mackenzie Financial, and Groupe Transcontinental G.T.C. Ltee.

**JOHN F. CORDEAU**[1], a resident of Calgary, has been a director of Petro-Canada since 1994. Mr. Cordeau is a partner and Litigation Department Head at Bennett Jones, a Calgary-based law firm.

**PURDY CRAWFORD**, a resident of Toronto, has been a director of Petro-Canada since 1995. Mr. Crawford is chairman of Imasco Limited, CT Financial Services Inc. and Canada Trustco Mortgage Company. He is a director of Camco Inc., Canadian National Railway Company, Inco Limited, Maple Leaf Foods Inc., Nova Scotia Power Inc., Aeroquip-Vickers Inc. and the Venator Group Inc.

**CLAUDE FONTAINE**[1], a resident of Montreal, has been a director of Petro-Canada since 1987. Mr. Fontaine is a senior partner and executive committee member of Ogilvy Renault, a Montreal-based law firm. He is a director of Domtar Inc., Optimum General Inc., the Montreal Heart Institute Research Fund and the Council for Canadian Unity.

**THOMAS E. KIERANS**, a resident of Toronto, has been a director of Petro-Canada since 1991 and chairman of the board since 1997. Mr. Kierans is president and chief executive officer of the C.D. Howe Institute. He is chairman of First Marathon Inc. and Moore Corporation Limited, and a director of Manufacturers Life Insurance Company, Fishery Products International Ltd., IPSCO Inc., Inmet Mining Corp. and BCE/Bell Canada. He is advisor to Schroder Canada Limited and North Limited.

**BRIAN F. MACNEILL**, a resident of Calgary, has been a director of Petro-Canada since 1995. Mr. MacNeill is president and chief executive officer of Enbridge Inc. He is chairman of Consumers' Gas Co. Ltd. and a director of the C.D. Howe Institute, Enbridge Inc., Toronto-Dominion Bank and Veritas DGC Inc.

**GERALD J. MAIER**, a resident of Calgary, has been a director of Petro-Canada since 1995. Mr. Maier is chairman emeritus of TransCanada PipeLines Limited. He is chairman of the Van Horne Institute and Notre Dame College and vice-chairman of NOVA Chemicals Corporation. He is president of Granmar Investments Ltd. and a director of BCE Inc., the Bank of Nova Scotia, Xpronet Inc., Stream-Flo Industries Ltd., United Western Communications Ltd. and the Manning Foundation.

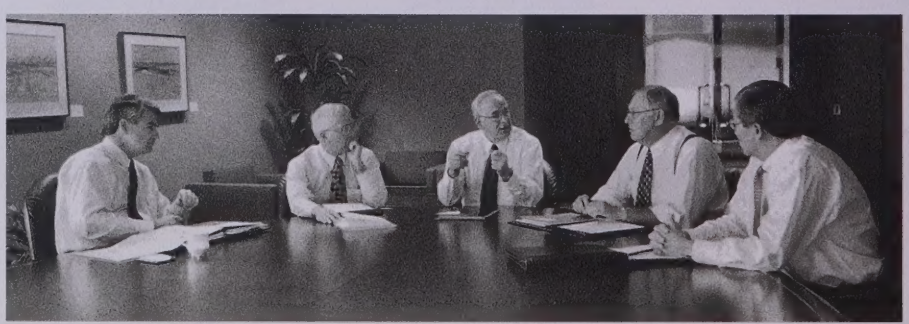
**GUYLAINE SAUCIER**[1], a resident of Montreal, has been a director of Petro-Canada since 1991. Ms. Saucier is chairperson of the Canadian Broadcasting Corporation. She is a director of the Bank of Montreal, Northern Telecom Limited, AXA-Boreal and Tembec Inc.

**WILLIAM W. SIEBENS**, a resident of Calgary, has been a director of Petro-Canada since 1986. Mr. Siebens is president and chief executive officer of Candor Investments Ltd., and chairman of Freehold Royalty Trust. He is a director of the Calgary Olympic Development Association and The Fraser Institute.

**JAMES M. STANFORD**, a resident of Calgary, has been a director of Petro-Canada since 1990 and president and chief executive officer since 1993. Mr. Stanford is a director of Inco Limited, Fortis Inc., Moore Corporation Limited and the Canadian Wheat Board. He is a member of the Business Council on National Issues, the Council for Canadian Unity, and Industry Canada's Year 2000 National Task Force, and serves on the Board of Governors of the University of Alberta.

## EXECUTIVE LEADERSHIP TEAM

(from left):
Bob McCaskill, Senior Vice-President
Wesley Twiss, Executive Vice-President and Chief Financial Officer
Jim Stanford, President and Chief Executive Officer
Norm McIntyre, Executive Vice-President
Boris Jackman, Executive Vice-President



1 Audit Committee member

# GENERAL INFORMATION

### CONVERSION FACTORS

To conform with common usage, imperial units of measurement are used in this report to describe exploration and production, while metric units are used for refining and marketing. Dollars are Canadian unless otherwise stated.

1 cubic metre (liquids) = 6.29 barrels
1 cubic metre (natural gas) = 35.31 cubic feet
1 litre = 0.22 imperial gallon
1 hectare = 2.47 acres
1 cubic metre = 1 000 litres

### ADDITIONAL PUBLICATIONS

The following publications are available on request from Investor Relations or Corporate Communications:

- Statistical Supplement to the Annual Report, containing 10-year financial information and more detailed operating data
- Annual Information Form, filed with Canadian securities regulators
- Form 40-F, filed with U.S. Securities and Exchange Commission
- Quarterly Reports, published about four weeks after the end of the first, second and third quarters
- Fourth annual progress report in support of Canada's Climate Change and Voluntary Challenge and Registry program
- Annual Community Investment Report
- Petro-Canada's Code of Business Conduct


### PETRO-CANADA

P.O. Box 2844
Calgary, Alberta Canada T2P 3E3
Telephone (403) 296-8000
Fax (403)296-3030
Visit our website at:
www.petro-canada.ca

### INVESTOR AND ANALYST ENQUIRIES

Investor Relations (403) 296-4040
Email: investor@petro-canada.ca

### MEDIA AND GENERAL ENQUIRIES

Corporate Communications
(403) 296-8482


# GLOSSARY OF FINANCIAL TERMS AND RATIOS

### TERMS

*Barrel of oil equivalent*: Natural gas production (excluding injectants) is converted using 10 000 cubic feet of gas for one barrel of oil.

*Capital Employed*: Total of shareholders' equity and debt, less related foreign currency translation adjustment.

*Cash Flow*: Cash flow from operations before changes in non-cash working capital items.

*Debt*: Notes payable - Hibernia and long-term debt including current portion.

*Earnings From Operations*: Earnings before gains (losses) on asset sales.

*Operating Expenses*: Producing, refining and marketing expenses.

*Overhead Expenses*: General and administrative expenses.

### RATIOS

*Return On Capital Employed*: Net earnings plus after-tax interest divided by average capital employed. Measures net earnings relative to the asset base.

*Operating Return On Capital Employed*: Earnings from operations plus after-tax interest expense divided by average capital employed. Measures operating earnings relative to the asset base.

*Return on Equity*: Net earnings divided by average shareholders' equity. Measures the return earned by shareholders on their investment in the Company.

*Cash Flow Return On Capital Employed*: Cash flow plus after-tax interest expense divided by average capital employed. Measures cash flow generated relative to the asset base.

*Current Ratio*: Current assets divided by current liabilities. Reflects the Company's short-term liquidity and its ability to pay short-term debts.

*Interest Coverage*:
Earnings basis: Earnings before interest expense and provision for income taxes divided by interest expense plus capitalized interest.

EBITDAX basis: Earnings before interest expense, income taxes, depreciation, depletion and amortization and exploration expenses divided by interest expense plus capitalized interest.

Cash flow basis: Cash flow before interest expense and current income taxes divided by interest expense plus capitalized interest.
All are indicators of the Company's ability to service its outstanding debt.

*Debt to Cash Flow*: Debt divided by cash flow. Indicates the Company's ability to discharge its outstanding debt.

*Debt to Debt Plus Equity*: Debt divided by debt plus equity. Indicates the relative amount of debt in the Company's capital structure. Measures financial strength.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Printed in Canada by: H. MacDonald Printing

Portions of this annual report were printed on paper containing at least 50 per cent waste fibre, including a minimum of 20 per cent post-consumer waste. Inks are based on linseed oil and contain no heavy metals. The printing process was alcohol-free. Volatile organic compounds associated with printing were reduced by 50 to 75 per cent from the levels which would have been produced using traditional inks and processes.

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